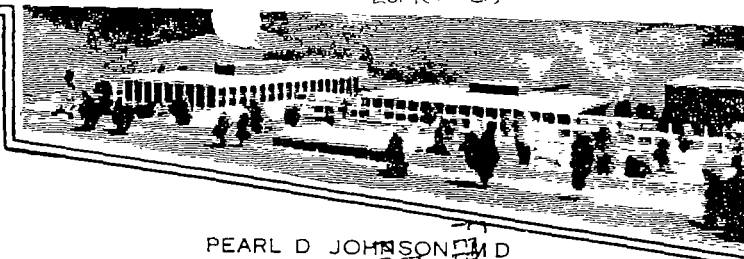
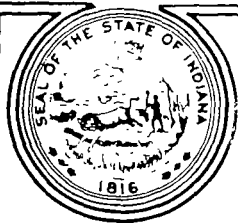


LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE. 738-2020 OR 663-0760



PEARL D. JOHNSON, M.D.
HEALTH COMMISSIONER
February 12, 1986

Gary Development Company
Box 6056
Gary, Indiana 46406

US EPA RECORDS CENTER REGION 5



436276

Attn: Mr. Larry Hagen

Given below are test data obtained from four samples of well water, which were delivered to this laboratory on February 6, 1986.

<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.2	20.0	368	349.4	0.16	1192
South	7.3	102.2	1184	934.4	0.10	1862
East	7.7	63.0	1067	232.2	0.08	1750
West	7.6	84.3	19	130.5	1.87	526

Note: Units of concentration for Chloride, COD, Hardness, Iron, and Dissolved Solids are parts-per-million.

Sincerely,

Cheryl A. Pauer

Cheryl A. Pauer
Chemist

Record Review Form

	<u>Y</u>	<u>N</u>	<u>Comments</u>
F. If in an assessment program, was annual report sent to the Technical Secretary containing the results of the groundwater quality assesment program?			
i) Did the report include the calculated (or measured) rate of migration of hazardous waste or constituents in the groundwater during the year?			

- ✓ * Fill out and attach State Summary Tables and calculation of statistics. Circle all values that exceed MCL's. Note statistical differences.
- ✓ * Fill out and attach CMEL log. Return complete package to Supervisor.
- * If violations, prepare and attach appropriate enforcement referrals.

Doc Id 0047G

Letter to RCRA Groundwater File(I-F)
thru enforcement

It says name
Development
Lake County

EPA Identifier IND 077005916
Gary Land Development Co
Gary, IN
LAKE CO.

RESULTS OF GROUND-WATER MONITORING
AFTER THE FIRST YEAR

Figure 9-3

9-19

circu sent to EPA 4/4/86 KLS

Figure 9-3 (con't)

EPA Identifier

IND 077005916

Person to contact about data:

Larry Nagen

Telephone number:

Number of wells reported:

Upgradient

Downgradient

Total

4

Sampling Dates (Month, Year):

2/6/86 2nd Qtr
11/6/85 1st Qtr

Name and address of laboratory performing analyses:

LAKE Co Health Dept.
2293 N. Main St.
Crown Point, IN 46307

Identifier IND 077005916

Sample Date: 2/6/86

PARAMETERS USED AS INDICATORS OF GROUND-WATER CONTAMINATION

Upgradient vs Downgradient Unknown

PARAMETER (UNIT)	Upgradient _____ Downgradient _____						Upgradient _____ Downgradient _____						COMMENTS
	Well # <u>North</u> Water Elev. (ft.) _____						Well # <u>South</u> Water Elev. (ft.) _____						
	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	
pH (pH units)	7.2						7.3						
Specific Conductance (umhos/cm)													
TOC (mg/l)													
TOX (ug/l)													

CO₂D (mg/l) 368
 Calcium Hardness (mg/l) 349.4
 TDS (mg/l) 1192

1184
 934.4

PARAMETERS USED AS INDICATORS OF GROUNDWATER CONTAMINATION

PARAMETER (UNIT)	Upgradient _____ Downgradient _____						Upgradient _____ Downgradient _____						COMMENTS
	Well # <u>East</u> Water Elev. (ft.) _____						Well # <u>West</u> Water Elev. (ft.) _____						
	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	
pH (pH units)	7.7						7.6						
Specific Conductance (umhos/cm)													
TOC (mg/l)													
TOX (ug/l)													

CO₂D (mg/l) 1067
 Calcium Hardness (mg/l) 232.2
 TDS (mg/l) 1750

19
 1305

526

○ => SDWS

EPA Identifier

IND 077005916

Sampling Date:

2/6/86

PARAMETERS ESTABLISHING GROUND-WATER QUALITY

PARAMETER (UNIT)	Upgradient VS. Downgradient Unknown UPGRADIENT				COMMENTS
	WELL # NORTH WATER ELEV. (ft) ____	WELL # SOUTH WATER ELEV. (ft) ____	WELL # EAST WATER ELEV. (ft) ____	WELL # WEST WATER ELEV. (ft) ____	
Chloride (mg/l)	20	102.2	63	84.3	
Iron (mg/l)	.16	.10	.08	(1.87)	
Manganese (mg/l)					
Phenols (ug/l)					
Sodium (mg/l)					
Sulfate (mg/l)					

PARAMETER (UNIT)	DOWNGRADIENT				COMMENTS
	WELL # WATER ELEV. (ft) ____	WELL # WATER ELEV. (ft) ____	WELL # WATER ELEV. (ft) ____	WELL # WATER ELEV. (ft) ____	
Chloride (mg/l)					
Iron (mg/l)					
Manganese (mg/l)					
Phenols (ug/l)					
Sodium (mg/l)					
Sulfate (mg/l)					

O = > SDWS

EPA Identifier IND 077005916

Sampling Date: 11-6-85

PARAMETERS ESTABLISHING GROUND-WATER QUALITY

PARAMETER (UNIT)	Upgradient US Downgradient Unknown				COMMENTS
	WELL # NORTH WATER ELEV. (ft) _____	WELL # SOUTH WATER ELEV. (ft) _____	WELL # EAST WATER ELEV. (ft) _____	WELL # WEST WATER ELEV. (ft) _____	
Chloride (mg/l)	19.1	139.2	108.4	118.7	
Iron (mg/l)	.08	(2.04)	.27	(65)	
Manganese (mg/l)					
Phenols (ug/l)					
Sodium (mg/l)					
Sulfate (mg/l)					

PARAMETER (UNIT)	Downgradient				COMMENTS
	WELL # _____ WATER ELEV. (ft) _____	WELL # _____ WATER ELEV. (ft) _____	WELL # _____ WATER ELEV. (ft) _____	WELL # _____ WATER ELEV. (ft) _____	
Chloride (mg/l)					
Iron (mg/l)					
Manganese (mg/l)					
Phenols (ug/l)					
Sodium (mg/l)					
Sulfate (mg/l)					

0 = > SDWS

Figure 9-3 (cont)

EPA Identifier

IND 077005916

Sample Date:

11-6-85

PARAMETERS USED AS INDICATORS OF GROUND-WATER CONTAMINATION

Upgradient vs Downgradient Unknown

PARAMETER (UNIT)	Upgradient _____ Downgradient _____						Upgradient _____ Downgradient _____						COMMENTS
	Well # <u>NORTH</u> Water Elev. (ft.) _____						Well # <u>SOUTH</u> Water Elev. (ft.) _____						
	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	
pH (pH units)	7.2						6.6						
Specific Conductance (umhos/cm)													
TOC (ug/l)													
TOX (ug/l)													

COD (mg/L)
Calcium Hardness (mg/L)
TDS (mg/L)

342
914.6
684

91
588.0
1584

PARAMETERS USED AS INDICATORS OF GROUNDWATER CONTAMINATION

PARAMETER (UNIT)	Upgradient _____ Downgradient _____						Upgradient _____ Downgradient _____						COMMENTS
	Well # <u>East</u> Water Elev. (ft.) _____						Well # <u>West</u> Water Elev. (ft.) _____						
	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	Rep#1	Rep#2	Rep#3	Rep#4	Mean	Variance	
pH (pH units)	7.8						7.8						
Specific Conductance (umhos/cm)													
TOC (mg/l)													
Tr (ug/l)													

COD (mg/L)
Rocks

624

25
1048

1-2-2-2 (CON.T)

GENERAL INFORMATION

EPA Identifier: IND 077005916

Type of hazardous waste management facility component(s):
(Indicate number of each type at site)

Landfill 1
Surface Impoundment _____
Land Treatment _____
Other (specify) _____

Location of Facility: Cline Ave. & Gary Ave.

Company Name: Gary Land Development

Address: PO 6056

Gary, IN 46406

Person to contact about data: Larry Hagen

Telephone number: _____

Number of wells reported:

Upgradient _____
Downgradient _____
Total 4

Sampling Dates (Month, Year): _____

Are ground-water quality parameters recorded?

No RCRA data recorded

YES _____

NO _____

Site map attached?

YES _____

NO _____

EPA Identifier _____

PARAMETERS USED AS INDICATORS OF GROUND-WATER CONTAMINATION

Upgradient Well

Well # _____

PARAMETER (UNIT)		pH (pH UNITS)	SPECIFIC CONDUCTANCE (umhos/cm)	TOC (ug/l)	TOX (ug/l)
Quarter 1	<u>REPS</u>				
	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Quarter 2	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Quarter 3	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Quarter 4	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Background Mean					
Background Variance					

EPA Identifier: _____

PARAMETERS USED AS INDICATORS OF GROUND-WATER CONTAMINATION

Downgradient Wells*

PARAMETER (UNIT)		pH (pH UNITS)	SPECIFIC CONDUCTANCE (umhos/cm)	TOC (ug/l)	TOX (ug/l)
Well # _____	QUARTER				
Sample Date _____	1				
Water Elev. _____	2				
	3				
	4				
Well # _____	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Well # _____	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Well # _____	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				

* Use optional form on next page if downgradient samples were replicated.
NOTE: Downgradient samples do not need to be replicated.

EPA Identifier: _____

PARAMETERS USED AS INDICATORS OF GROUND-WATER CONTAMINATION

Optional Form for Downgradient Wells*

Well # _____

PARAMETER (UNIT)		pH (pH UNITS)	SPECIFIC CONDUCTANCE (umhos/cm)	TOC (ug/l)	TOX (ug/l)
Quarter 1	REPS				
	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Quarter 2	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Quarter 3	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				
Quarter 4	1				
Sample Date _____	2				
Water Elev. _____	3				
	4				

* Xerox this form and use one form per well if downgradient samples were replicated.

PARAMETERS ESTABLISHING GROUND-WATER QUALITY

PARAMETER (UNIT)	WELL # _____ Upgradient _____ Downgradient _____				WELL # _____ Upgradient _____ Downgradient _____				COMMENTS
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Chloride (mg/l)									
Iron (mg/l)									
Manganese (mg/l)									
Phenols (ug/l)									
Sodium (mg/l)									
Sulfate (mg/l)									

PARAMETER (UNIT)	WELL # _____ Upgradient _____ Downgradient _____				WELL # _____ Upgradient _____ Downgradient _____				COMMENTS
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Chloride (mg/l)									
Iron (mg/l)									
Manganese (mg/l)									
Phenols (ug/l)									
Sodium (mg/l)									
Sulfate (mg/l)									

Q = Quarter

//

EPA Identifier _____

DRINKING WATER SUITABILITY PARAMETERS

PARAMETER (UNIT)	Upgradient _____ Downgradient _____ Well # _____				Upgradient _____ Downgradient _____ Well # _____				COMMENTS
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	
Arsenic (mg/l)									
Barium (mg/l)									
Cadmium (mg/l)									
Chromium (mg/l)									
Fluoride (mg/l)									
Lead (mg/l)									
Mercury (mg/l)									
Nitrate, as N (mg/l)									
Selenium (mg/l)									
Silver (mg/l)									
Endrin (ug/l)									
Lindane (ug/l)									
Methoxychlor (ug/l)									
Toxaphene (ug/l)									
2,4-D (ug/l)									
2,4,5-TP Silvex (ug/l)									
Radium (pCi/l)									
Gross Alpha (pCi/l)									
Gross Beta (pCi/l)									
Coliform Bacteria (/100ml)									

*Exceeds EPA interim primary drinking water standards

DRINKING WATER SUITABILITY PARAMETERS

PARAMETER (UNIT)	Upgradient _____ Downgradient _____				Upgradient _____ Downgradient _____				COMMENTS
	Well # _____				Well # _____				
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	
Arsenic (mg/l)									
Barium (mg/l)									
Cadmium (mg/l)									
Chromium (mg/l)									
Fluoride (mg/l)									
Lead (mg/l)									
Mercury (mg/l)									
Nitrate, as N (mg/l)									
Selenium (mg/l)									
Silver (mg/l)									
Endrin (ug/l)									
lindane (ug/l)									
Methoxychlor (ug/l)									
Toxaphene (ug/l)									
2,4-D (ug/l)									
2,4,5-TP Silvex (ug/l)									
Radium (pCi/l)									
Gross Alpha (pCi/l)									
Gross Beta (pCi/l)									
Coliform Bacteria (/100ml)									

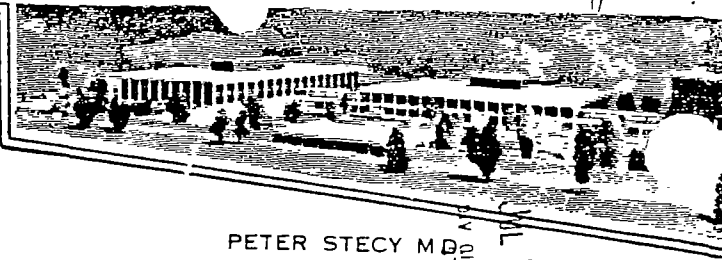
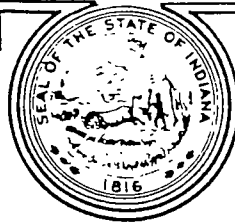
*Exceeds EPA interim primary drinking water standards

SITE MAP

(Provide facility property boundaries, location of hazardous waste management component(s), location of wells, well numbers, direction of groundwater flow, and indicate "true" north. Also provide distance scale if possible.)

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE 738-2020 OR 663-0760



PETER STECY M.D.
HEALTH COMMISSIONER

July 7, 1982

RECEIVED
DIVISION OF HEALTH
JUL 11 11 22 AM '82

2 CID
I-F

Gary Development Co. Inc.
Box 6056
Gary, Indiana 46406
Attention: Mr. Larry Hagen

Test data tabulated below were obtained for 3 samples of water from Sanitary Landfill 45 - 2 that were delivered to this laboratory on July 1, 1982.

Sample No.	pH	Chloride ppm	Chemical Oxygen Demand ppm	Total Hardness ppm	Total Iron ppm	Total Dissolved Solids ppm
1	8.1	400	240	400	5.0	1800
3	7.7	200	200	600	6.5	1000
5	8.4	100	70	120	0.0	1300

July 1982
WATER SAMPLES

Sincerely,

Andrew F. Livovich

Andrew F. Livovich

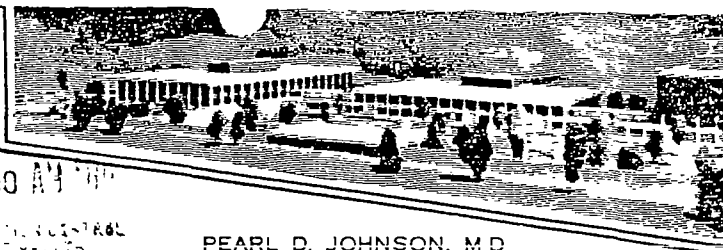
C. Chemist

AFL/lr

- # 1 WEST WELL BY VULCAN
- # 2 NORTH WELL BY ADMIXTURES PLANT - DRY - NO TEST
- # 3 SOUTH WELL BY RIVER
- # 5 WELL AT BUILDINGS 380' DEEP

LAKE COUNTY HEALTH DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE: 738-2020 OR 663-0760



PEARL D. JOHNSON, M.D.
HEALTH COMMISSIONER

October 31, 1984

2cd
I-F

Gary Development Co.
Box 6056
Gary, Indiana 46406

Attention: Mr. Larry Hagen:

The following test data obtained for the 4 well water samples that you delivered on October 30, 1984.

<u>Well</u>	<u>pH</u>	<u>Chloride</u>	<u>Chemical Oxygen Demand</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
Parts per million						
North	7.7	100	150	260	1.4	750
South	7.6	400	100	770	1.3	1900
West	7.9	600	200	650	.53	1850
East	7.75	250	100	550	1.35	2000

Attached please find Statement of fees.

Sincerely,

Andrew F. Livovich
Andrew F. Livovich
C. Chemist

AFL/lr

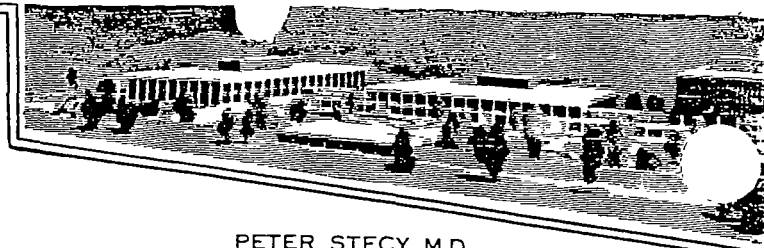
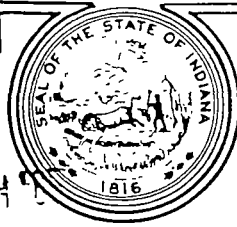
LAKE COUNTY HEALTH DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER

2293 NORTH MAIN STREET

CROWN POINT, INDIANA 46307

PHONE: 738-2020 OR 663-0760



PETER STECY MD
HEALTH COMMISSIONER

February 13, 1985

zcld
I-F

Gary Development Co.
Box 6056
Gary, Ind. 46406
Attn: Mr. Larry Hagen

Dear Mr. Hagen:

Given below are test data obtained from four Well Water Samples that you delivered on February 8, 1985. These are as follows:

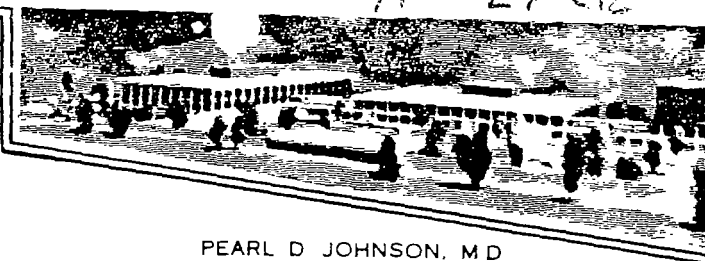
<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Disolved Solids</u>
North	7.7	100	160	210	1.0	770
South	7.6	360	180	1150	1.35	2050
East	7.9	150	160	250	1.4	2250
West	7.75	250	80	500	0.4	1750

Sincerely,

Andrew F. Livovich
Andrew F. Livovich
C. Chemist

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT INDIANA 46307
PHONE 738-2020 OR 663-0760



PEARL D JOHNSON, M.D
HEALTH COMMISSIONER

August 23, 1985

Gary Development Company
Box 6056
Gary, Indiana 46406

AUG 31 10 13 AM '85
DIVISION OF LAND
POLLUTION CONTROL
STATE
BOARD OF HEALTH

Attn: Mr. Larry Hagen:

Given below are test data obtained from four samples of Well
Water which you delivered to this laboratory on July 30, 1985.

<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.5	22.4	375	298	0.15	600
South	7.5	127.3	60	693	0.17	1200
East	7.5	54.8	900	1098	0.17	1900
West	8.0	616.0	17	242	0.49	1500

Sincerely,

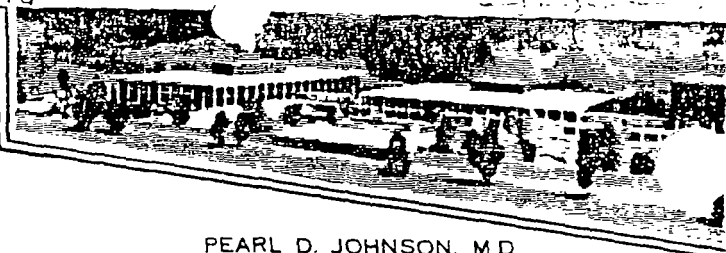
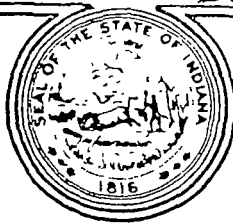
Cheryl A. Pauer

Cheryl A. Pauer

copy sent to EPA - Bga 10/15/85

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE: 738-2020 OR 663-0760



PEARL D. JOHNSON, M.D.
HEALTH COMMISSIONER
November 15, 1985

Gary Development Company
Box 6056
Gary, Indiana 46406

Attn: Mr. Larry Hagen

Nov 21 2 16 PM '85
DIVISION OF LAND
POLLUTION CONTROL
STATE
BOARD OF HEALTH

Given below are test data obtained from four samples of well water, which were delivered to this laboratory on November 6, 1985.

<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.2	19.1	342	314.6	0.08	681
South	6.6	139.2	91	588.0	2.04	1584
East	7.8	108.4	624	217.4	0.27	2563
West	7.8	118.7	25	194.8	0.65	656

Note: Units of concentration for Chloride, COD, Hardness, Iron, and dissolved solids are parts-per-million.

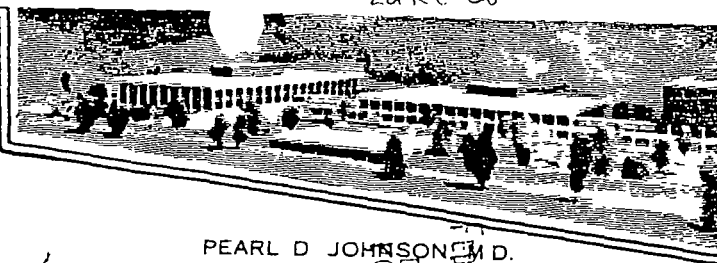
Sincerely,

Cheryl A. Pauer

Cheryl A. Pauer
Chemist

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE. 738-2020 OR 663-0760



PEARL D. JOHNSON, M.D.
HEALTH COMMISSIONER
February 12, 1986

1st Quarter
667

RECEIVED
LAKE COUNTY HEALTH DEPARTMENT
FEB 12 1986
3 05 PM '86

I-F

Gary Development Company
Box 6056
Gary, Indiana 46406

Attn: Mr. Larry Hagen

Given below are test data obtained from four samples of well water, which were delivered to this laboratory on February 6, 1986.

<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.2	20.0	368	349.4	0.16	1192
South	7.3	102.2	1184	934.4	0.10	1862
East	7.7	63.0	1067	232.2	0.08	1750
West	7.6	84.3	19	130.5	1.87	526

Note: Units of concentration for Chloride, COD, Hardness, Iron, and Dissolved Solids are parts-per-million.

Sincerely,

Cheryl A. Pauer

Cheryl A. Pauer
Chemist

4 WELLS INSTEAD of (6)

Page 1 of 13

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD INFORMATION

Sample I.D. _____ Control No. A0755-A0760 Site Contact LARRY HAGEN, J.
Sample Location, City First: GARY, IN; GARY LAND DEV.
LAKE CO.

Sample Date 7/20/85 10:30 AM PM Collector(s) A. CARR
Delivered to Lab 7 AM PM L. DAVIDSON

By (Signature) Lou L. Davidson

CONTAINERS	#	Monitoring Well Data
1 L Plastic Bottles	<u>32</u>	Casing Stick-up _____
1 L Glass Bottles	<u>17</u>	Well Depth _____
1 Pint Glass Jars	<u>0</u>	Water Depth (from casing top) _____
40 mL Vials	<u>16</u>	

PRESERVATIVES USED	Chemical	Lot No.	Amount
<u>Sample Iced</u>	* <u>✓ 50% H2SO4</u>	<u>#15</u>	<u>2 ml/L</u>
	* <u>✓ HNO3</u>	<u>#0385</u>	<u>5 ml/L</u>
	* <u>✓ 50% NaOH</u>	<u>"</u>	<u>1 ml/L</u>
No Preservative Used*	<u>Hg pres.</u>	<u>"</u>	<u>20 ml/L</u>
	* <u>✓ ZnAc</u>	<u>"</u>	<u>"</u>

SAMPLE TYPE (Circle)				
Well	<u>Mon. Well</u>	Ash	Indust. Waste	Solid
Creek	<u>Leachate</u>	Soil	Waste Pile	Fluid
Ditch	<u>Oil</u>	Sludge	Drummed Waste	Truck
Lagoon	<u>Solvent</u>	Sand	Field Blank	Misc.

Sampling Methods: (grab) composite) _____

Miscellaneous
For Enforcement? YES NO
Results Requested By T/I Handling Precautions? YES NO

PROGRAM AREA RCRA CERCLA SOLID WASTE SUMMER MONITOR

Approximate Concentration (Worst Case)
less than 10 ppm 1000 ppm 5% greater than 15%

Notes:

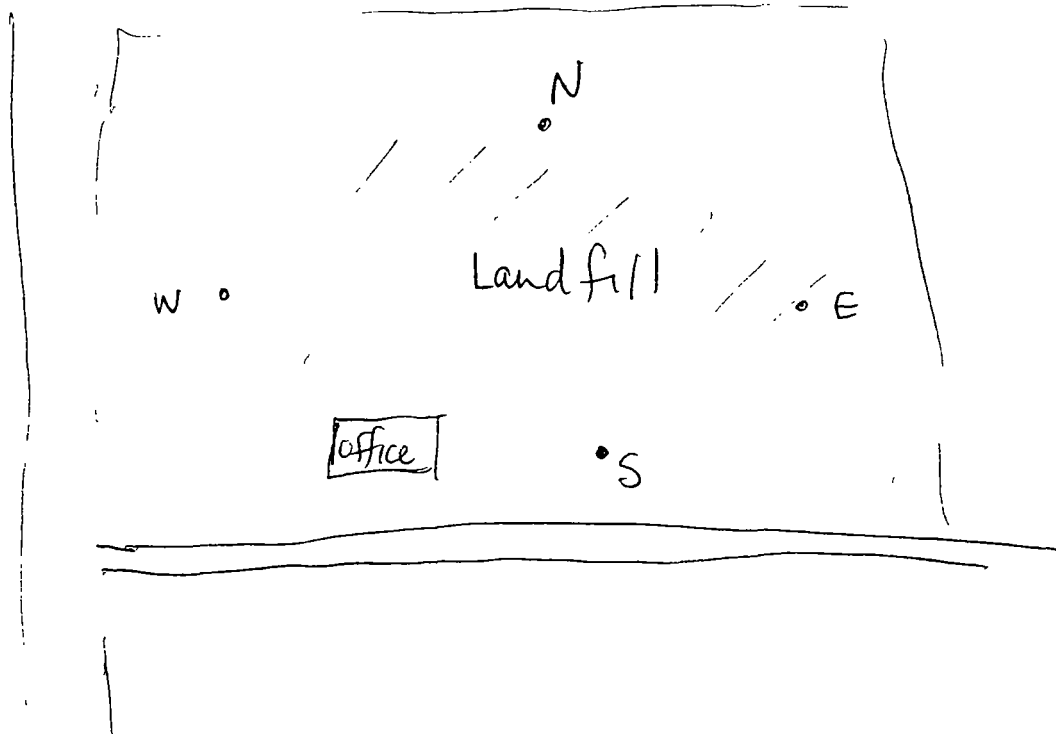
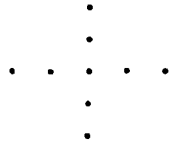
Copy Sent to EPA
8/1/85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD MAP

Page 2 of 13

Sample I.D. _____ Control No. A0755-A0760
Sample Date 7/30/85 __: __ AM PM

MAP:



INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD TESTING

Sample I.D. WEST WELL Control No. A0755

Results of Field Testing

Test	Result	<u>PRESERVATIVES USED</u>	
		Chemical	Lot No.
* _____	_____	50% H ₂ SO ₄	#0385
_____	_____	HNO ₃	"
_____	_____	50% NaOH	"
_____	_____	2N Zn-Ac	"
_____	_____	_____	_____

Sample Date 7/30/85 9:30 AM PM

CONTAINERS

	#
1 L Plastic Bottles	<u>4</u>
1 L Glass Bottles	<u>2</u>
1 Pint Glass Jars	<u>0</u>
40 mL Vials	<u>2</u>
Other	_____

Monitoring Well Data

Casing Stick-up	<u>3.5'</u>
Well Depth	<u>14.8"</u>
Water Depth (from casing top)	<u>4.4'</u>

SAMPLE TYPE (Circle)

<u>11</u>	<u>Mon. Well</u>	Ash	Indust. Waste	Solid
Leak	Leachate	Soil	Waste Pile	Fluid
Ditch	Oil	Sludge	Drummed Waste	Truck
Lagoon	Solvent	Sand	Field Blank	Misc.

Which samples were filtered prior to preservation? NONE

Deviations from Sampling Plan

* No instruments available to take pH
Temp or Conductivity - all broken &
other lab didn't have any either

Other Observations

- Purged wells w/ bailer till dry
- No concrete seals on any wells

(Signature)

Date

Lori L. Davidson
7-30-85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD TESTING

Sample I.D. SOUTH WEL Control No. A0756

Results of Field Testing

<u>Test</u>	<u>Result</u>	<u>PRESERVATIVES USED</u>	
		<u>Chemical</u>	<u>Lot No.</u>
<u>*</u>		<u>50% H2SO4</u>	<u>#0385</u>
		<u>HNO3</u>	<u>"</u>
		<u>50% NaOH</u>	<u>"</u>
		<u>2N Zn-Ac</u>	<u>"</u>

Sample Date 7/30/85 10:00 AM PM

CONTAINERS

	<u>#</u>
1 L Plastic Bottles	<u>4</u>
1 L Glass Bottles	<u>3</u>
1 Pint Glass Jars	<u>0</u>
40 mL Vials	<u>2</u>
Other	<u> </u>

Monitoring Well Data

Casing Stick-up	<u>0"</u>
Well Depth	<u>14.5'</u>
Water Depth (from casing top)	<u>3.5'</u>

SAMPLE TYPE (Circle)

Well	<u>Mon. Well</u>	Ash	Indust. Waste	Solid
Creek	<u>Leachate</u>	Soil	Waste Pile	Fluid
Ditch	Oil	Sludge	Drummed Waste	Truck
Lagoon	Solvent	Sand	Field Blank	Misc.

Which samples were filtered prior to preservation? NONE

Deviations from Sampling Plan

* See pg 3

Other Observations

* Rusted metal well - only ~6" Above ground
no real cover - Needs to be replace. It is over
2 yrs old
See pg 3

(Signature)

Date

Lori L. Davidson
7-30-85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD TESTING

Sample I.D. East Well Control No. A0757DRY WELL

Results of Field Testing

<u>Test</u>	<u>Result</u>	<u>PRESERVATIVES USED</u>	
		<u>Chemical</u>	<u>Lot No.</u>
		<u>50% H2SO4</u>	<u>#0385</u>
		<u>HNO3</u>	<u>1</u>
		<u>50% NaOH</u>	<u>1</u>
		<u>2N Zn-Ac</u>	<u>1</u>

Sample Date 7/30/85 10:15 (AM) PMCONTAINERS

1 L Plastic Bottles	<u>4</u>
1 L Glass Bottles	<u>2</u>
1 Pint Glass Jars	<u>0</u>
40 mL Vials	<u>2</u>
Other	

Monitoring Well Data

Casing Stick-up	<u>1.6'</u>
Well Depth	<u>26.7' - thru silt</u>
Water Depth (from casing top)	<u>16.7'</u>

SAMPLE TYPE (Circle)

<u>ll</u>	<u>Mon. Well</u>	Ash	Indust. Waste	Solid
<u>Leak</u>	<u>Leachate</u>	Soil	Waste Pile	Fluid
<u>Ditch</u>	<u>Oil</u>	Sludge	Drummed Waste	Truck
<u>Lagoon</u>	<u>Solvent</u>	Sand	Field Blank	Misc.

Which samples were filtered prior to preservation? NONE

Deviations from Sampling Plan

* Silt-filled Well - able to get ~ 1/2 gal
of very silty sample for other labs sample
but not enough for ours

Other Observations

(Signature) Lori L. Davidson
 Date 7-30-85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD TESTING

Sample I.D. NORTHWELL Control No. A0758

Results of Field Testing

<u>Test</u>	<u>Result</u>	<u>PRESERVATIVES USED</u>	
		<u>Chemical</u>	<u>Lot No.</u>
		<u>50% H₂SO₄</u>	<u>#0385</u>
		<u>HNO₃</u>	<u>"</u>
		<u>50% NaOH</u>	<u>"</u>
		<u>2N Zn-Ac</u>	<u>"</u>

Sample Date 7/30/85 10:30 AM PM

CONTAINERS

1 L Plastic Bottles	<u>4</u>
1 L Glass Bottles	<u>2</u>
1 Pint Glass Jars	<u>0</u>
40 mL Vials	<u>2</u>
Other	<u> </u>

Monitoring Well Data

Casing Stick-up	<u>3'</u>
Well Depth	<u>19.75'</u>
Water Depth (from casing top)	<u>16'</u>

SAMPLE TYPE (Circle)

Well	<u>Mon. Well</u>	Ash	Indust. Waste	Solid
Creek	<u>Leachate</u>	Soil	Waste Pile	Fluid
Ditch	Oil	Sludge	Drummed Waste	Truck
Lagoon	Solvent	Sand	Field Blank	Misc.

Which samples were filtered prior to preservation? NONE

Deviations from Sampling Plan

See pg 3

Other Observations

Rusted Metal Casing
- very silty well
See pg 3

(Signature) Lori L. Davidson

Date 7-30-85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD TESTING

Sample I.D. DUNK DUP Control No. AC759
25 WEST WELL AC755
Results of Field Testing

<u>Test</u>	<u>Result</u>	<u>PRESERVATIVES USED</u>	
		<u>Chemical</u>	<u>Lot No.</u>
		<u>50% H₂SO₄</u>	<u>#0385</u>
		<u>HNO₃</u>	<u>"</u>
		<u>50% NaOH</u>	<u>"</u>
		<u>2N Zn-Ac</u>	<u>"</u>

Sample Date 7/30/85 9:30 AM PM

CONTAINERS

1 L Plastic Bottles 4
1 L Glass Bottles 2
1 Pint Glass Jars 0
40 mL Vials 2
Other

Monitoring Well Data

Casing Stick-up 3.5'
Well Depth 14.8'
Water Depth (from casing top) 4.4'

SAMPLE TYPE (Circle)

ll	<u>Mon. Well</u>	Ash	Indust. Waste	Solid
Leak	Leachate	Soil	Waste Pile	Fluid
Ditch	Oil	Sludge	Drummed Waste	Truck
Lagoon	Solvent	Sand	Field Blank	Misc.

Which samples were filtered prior to preservation? None

Deviations from Sampling Plan

Other Observations

(Signature) Lori L. Dardson

Date 7-30-85

Results of Field Testing

<u>Test</u>	<u>Result</u>	<u>PRESERVATIVES USED</u>	
		<u>Chemical</u>	<u>Lot No.</u>
		50% H ₂ SO ₄	#0385
		HNO ₃	"
		50% NaOH	"
		2N Zn-Ac	"

Sample Date 7/30/85 : AM PM

CONTAINERS

1 L Plastic Bottles	4
1 L Glass Bottles	
1 Pint Glass Jars	0
40 mL Vials	2
Other	

Monitoring Well Data

Casing Stick-up _____
Well Depth _____
Water Depth (from casing top) _____

SAMPLE TYPE(Circle)

Well	Mon. Well	Ash	Indust. Waste	Solid
Creek	Leachate	Soil	Waste Pile	Fluid
Ditch	Oil	Sludge	Drummed Waste	Truck
Lagoon	Solvent	Sand	Field Blank	Misc.

Which samples were filtered prior to preservation?_____

Deviations from Sampling Plan

[illegible]

Other Observations

(Signature)

Date 7-30-85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
FIELD TESTING

Sample I.D. BLANK Control No. A0760

Results of Field Testing

<u>Test</u>	<u>Result</u>	<u>PRESERVATIVES USED</u>	
		<u>Chemical</u>	<u>Lot No.</u>
		<u>50% H₂SO₄</u>	<u>#0385</u>
		<u>HNO₃</u>	<u>"</u>
		<u>50% NaOH</u>	<u>"</u>
		<u>2N Zn-Ac</u>	<u>"</u>

Sample Date 7/30/85 10:00 AM PMCONTAINERS

	<u>#</u>
1 L Plastic Bottles	<u>4</u>
1 L Glass Bottles	<u>2</u>
1 Pint Glass Jars	<u>0</u>
40 mL Vials	<u>2</u>
Other	<u> </u>

Monitoring Well Data N.A.

Casing Stick-up
Well Depth
Water Depth (from casing top)

SAMPLE TYPE (Circle)

<u>Well</u>	<u>Mon. Well</u>	<u>Ash</u>	<u>Indust. Waste</u>	<u>Solid</u>
<u>Leak</u>	<u>Leachate</u>	<u>Soil</u>	<u>Waste Pile</u>	<u>Fluid</u>
<u>Ditch</u>	<u>Oil</u>	<u>Sludge</u>	<u>Drummed Waste</u>	<u>Truck</u>
<u>Lagoon</u>	<u>Solvent</u>	<u>Sand</u>	<u>Field Blank</u>	<u>Misc.</u>

Which samples were filtered prior to preservation? NONE

Deviations from Sampling Plan

Other Observations

(Signature)

Date

Lori L. Davidson
7-30-85

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
LABORATORY ANALYSIS REQUEST

Date Delivered 1/1
Control No.(s) A0755-A0762
Lab Sample No.(s) _____
Parameters Or Tasks Requested (circle)- all of the task
(x)- part of the task

TASK 1	T	L	*	
Arsenic			25 ug/L	
Barium			500 ug/L	
Cadmium			5 ug/L	
Chromium			25 ug/L	
Lead			25 ug/L	
Mercury			1 ug/L	
Nickel			25 ug/L	
Selenium			5 ug/L	
Silver			25 ug/L	

TASK 5 - VOLATILE ORGANICS
YES NO

TASK 6 - SEMI-VOLATILE ORGANICS
YES NO

(See attached sheets for the above)

TASK 2	x	*	
Chloride		1.0 mg/L	
Iron		0.10 mg/L	
Manganese		.025 mg/L	
Phenols		.0005 mg/L	
Sodium		1.0 mg/L	
Sulfate		5.0 mg/L	

TASK 3	x	*	
pH (D002)		0.1	
Specific Cond.		5.0	
TOC		1.0 mg/L	
TOX		1.0 mg/L	

TASK 4	x	*	
Total Cyanide		5.0 ug/L	
Total Sulfide			

Miscellaneous	x	*	
Total Solids		mg/L	
Dissolved Solids		mg/L	
Flash Point (D001)		C	
PCB'S		ug/L	
Oil & Grease		mg/L	
COD		mg/L	
BTU			

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
CHAIN OF CUSTODY

I certify that the samples listed below were collected by me or in my presence.

Signature Fori L. Dardson

Control No.	Consisting of the Indicated No. of Bottles and Type	Date Collected and Time Sealed
A0755	4 pl, 2 l, 2 vials	7-30-85 10:30 AM PM
A0756	4 plastic, 3 l, 2 vials	" " AM/PM
A0757	DRY WELL	" " AM/PM
A0758	4 pl, 2 l, 2 vials	" " AM/PM
A0759	" "	" " AM/PM
A0760	" "	" " AM/PM
A0761		" " AM/PM
A0762		" " AM/PM

CARRIERS

I certify that I received the above samples.

Relinquished By (Signature)	Date and Time	Received By (Signature)	Date and Time
<u>Fori L. Dardson</u>	<u>7/31/85 10:40 AM PM</u>		
Title: <u>LPC Rep</u>			
Title: _____			
Title: _____			

LAB CUSTODIAN

I certify that I received the above samples. After recording these samples in the official record book, these same samples will be in the custody of competent laboratory personnel at all times or locked in a secured area.

Signature Julie Ward Date 7-31-85 Time 10:49 AM PM

INDIANA STATE BOARD OF HEALTH
DIVISION OF LAND POLLUTION CONTROL
SAMPLE RECEIPT

Site: GARY LAND DEVELOPMENT
LAKE CO.

Split Samples Requested : Yes No
Split Samples Accepted : Yes No

(Signature) James A. Hoge TR

Send Results To :

Name : GARY DEVELOPMENT CO INC.

Address : 474 N. CLINE AVE.

P.O. Box 6056

GARY INDIANA

47406

Comments

PC Representative
(Signature)

Lori F. Davidson

STATE BOARD OF HEALTH

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: November 13, 1985

TO: Karyl K. Schmidt, Chief *CCJ/KS 11/11/85*
Geology SectionTHRU: Jack C. Corpuz *jc 11/14/85*FROM: Gregory A. Busch *GAB 11/14*
Quality Assurance OfficerSUBJECT: Groundwater Monitoring Laboratory Results for
Gary Land Development
Lake County
Collected on July 30, 1985

I have reviewed the attached laboratory results. I have determined that the results are acceptable for use in enforcement actions. These results have been evaluated for the quality criteria contained in the Indiana Quality Assurance Project Plan. Any qualifications to the acceptance of this data will be identified in this memo.

Field duplicate samples are used to establish the representativeness of the field sampling (i.e., the homogeneity of the water in the well). The field duplicates compare well. Field blanks are used to determine sample contamination due to field sampling equipment, sample containers, and preservatives. The field blank is contaminated with a low level of iron.

The organic analysis for the parameters of acetone, acrolein, acrylonitrile, carbon disulfide, and paraldehyde exceeded the 14-day holding time for volatile organics. The results for the above parameters are not acceptable for use. Analysis for Task 6 (semi-volatiles) organics was not reported since it exceeded the holding time.

The interim primary and secondary drinking water levels (SDWA) violated are highlighted on the attached summary sheet(s). There are 12 such violations. The primary standards (SDWA) refer to the parameters of arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, endrin, lindane, methoxychlor, toxaphene, 2,4-D, and 2,4,5 TP Silvex. The secondary standards are not health based standards, but are levels set for the aesthetic quality of water. The secondary standards tested are chloride, iron, manganese, pH, sulfate, and total dissolved solids. Other parameters of interest are also highlighted.

GAB/tr
Attachments

*Copy Sent To EPA
RMC/12/11/86*

Sampled
7/30/85

PPM

Residue
Tot.

Lab
S
Tot.

TOC

As

Ba

Cd

Cr

Pb

Hg

Se

Ag

Ni

Fe

Mn

Ca

SO₄

Phosph

#

TOC

A0755 Field

A0756 "

A0758 (✓)

A0759 Dupli Field

A0760 Field Blank

A0757 East (E)

1 Dry Well

May Road Development
Lake County

ND = non detected at detection level

Gregory A. Buck

7/30/85
well ()

1,1-Dichloro-
ethane

PPB

12/21/1921

Temp

PH.

Sp Cord.

AD 755	Field	Ampl	< 2.
--------	-------	------	------

Not

A0756 (3) 4.8

Available

A0758 (11) 4.5

AO 759	Field Dupl ^{re}	< 2.
--------	--------------------------	------

90760 Field Blanks <2.

AC757^{ERST (E)} Dry Well

Gray Land Development
Lake County

Gregory A. Basak

Oct 28 10 05 AM '85

ANALYTICAL REPORT

DLPC Sample DIVISION OF LAND
POLLUTION CONTROL

A0755

EIS # LP062Date Received STATE 7-31-85
BOARD OF HEALTHReceived By: JW Date Report Submitted: 10-25-85TASK 1Turn Around Time 30 days

Mercury Preservative Batch No. _____

Other Metal Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> <u>(mg/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Arsenic	<0.01			96.0	<0.01
Barium	<0.5			119.7	<0.5
Cadmium	<0.005			109.	<0.005
Chromium	<0.01			110.	<0.01
Lead	0.020		82.5	105.4	<0.01
Mercury	<0.0002			85.7	<0.0002
Nickel	<0.01			120.	<0.01
Selenium	<0.005		101.9	88.1	<0.005
Silver	<0.005			103.3	<0.005

TASK 2Turn Around Time 30 days

Date Analyzed: 8-7-85

Phenol Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> <u>(mg/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Chloride	544.		112.	100.6	<1
Iron	1.2			104.5	<0.1
Manganese	0.213			103.5	<0.025
Phenols	0.008			108.3	<0.005
Sodium	277.		86.2	116.	<1.
Sulfate	355.			117.	<5.

ANALYTICAL REPORT

DLPC Sample A0755 EIS # LP062TASK 3Turn Around Time 30 days

Date Analyzed: 8-20-85

TOC Preservative Batch No. _____

<u>Parameter*</u>	<u>Result</u>	<u>Units</u>	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
				<u>Matrix</u>	<u>EPA QC</u>	
pH	7.8	pH				
Sp. Cond.	2780.	umhos				
TOC	9.828	mg/l	0.83		99.8	<1
TOH**	0.074	mg/l				
T Residue	1786.	mg/l				

* Sp. Cond. = Specific Conductance
 TOC = Total Organic Carbon
 TOH = Total Organic Halogen
 T Residue = Total Residue

** Samples LP062-LP066 exhibited 2.97 ug Chloride for 80 mg Carbon + Nitrate Wash

TASK 4Turn Around Time 30 days

Date Anayzed: 8-5-85

Cyanide Preservative Batch No. _____

Sulfide Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (ug/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Total Cyanide	<5.0			93.8	<5.0
Total Sulfide	<6.0	0			

ANALYTICAL REPORT

DLPC Sample A0755 EIS # LP062TASK 5Turn Around Time 30 days Date Analyzed: 8-19-85
VOC Vial Lot No.

SURROGATE RESPONSES

<u>Surrogate No.</u>	<u>Compound</u>	<u>% Recovery</u>	<u>QC Limits</u>
1	. Trichlorotrifluoroethane		71-128
	. 1,4-Dichlorobutane		69-121
3	. Bromochloromethane	98.9/102.0	78-122
	. Toluene, d6	107.7/106.7	82-118
	. 1,4-Dichlorobutane	98.0/107.2	76-124

SAMPLE RESULTS

<u>Parameter</u>	<u>Result</u> (ug/l)	<u>Precision</u> (% RSD)	<u>Accuracy (%R)</u>			<u>Method</u>
			<u>Matrix</u>	<u>EPA</u>	<u>QC</u>	<u>Blank ug/l</u>
Acetone	<10	0.0				<10
Acrolein	<10	0.0				<10
Acrylonitrile	<10	0.0				<10
Benzene	<2	0.0				<2
Bromoform	<2	0.0				<2
Bromodichloromethane	<2	0.0				<2
Bromomethane	<2	0.0				<2
Carbon Disulfide	<100	0.0				<100
Carbon Tetrachloride	<2	0.0				<2
Chlorobenzene	<2	0.0				<2
Chlorodibromomethane	<2	0.0				<2
Chloroethane	<2	0.0				<2
2-Chloroethylvinylether	<2	0.0				<2
Chloroform	<2	0.0				<2
Chloromethane	<2	0.0				<2
Dichlorodifluoromethane	<2	0.0				<2
1,1-Dichloroethane	<2	0.0				<2
1,2-Dichloroethane	<2	0.0				<2
1,1-Dichloroethene	<2	0.0				<2
t-1,2-Dichloroethene	<2	0.0				<2
1,2-Dichloropropane	<2	0.0				<2
c-1,2-Dichloropropene	<2	0.0				<2
t-1,2-Dichloropropene	<2	0.0				<2

ANALYTICAL REPORT

DLPC Sample A0755 EIS # LP062

<u>Parameter</u>	<u>Result</u> <u>(ug/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (%R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Ethylbenzene	<2	0.0			<2
Fluorotrichloromethane	<2	0.0			<2
2-Hexanone	<10	0.0			<10
Methylene Chloride	<2	0.0			<2
Methyl Ethyl Ketone	<10	0.0			<10
Methyl Isobutyl Ketone	<10	0.0			<10
Paraldehyde	<10	0.0			<10
Styrene	<2	0.0			<2
1,1,2,2-Tetrachloroethane	<2	0.0			<2
Tetrachloroethylene	<2	0.0			<2
Toluene	<2	0.0			<2
1,1,1-Trichloroethane	<2	0.0			<2
1,1,2-Trichloroethane	<2	0.0			<2
Trichloroethylene	<2	0.0			<2
Vinyl Acetate	<10	0.0			<10
Vinyl Chloride	<2	0.0			<2
m-Xylene	<10	0.0			<10
o-Xylene	<10	0.0			<10
p-Xylene	<10	0.0			<10

Oct 28 10 05 AM '85

ANALYTICAL REPORT

DLPC Sample
DIVISION OF LAND
POLLUTION CONTROL
STATE
BOARD OF HEALTH

A0756

EIS # LP063

Date Received: 10-25-85 Received By: JW Date Report Submitted: 10-25-85

TASK 1

Turn Around Time 30 days

Mercury Preservative Batch No. _____

Other Metal Preservative Batch No. _____

Parameter	Result (mg/l)	Precision (% RSD)	Accuracy (% R)		Method Blank
			Matrix	EPA QC	
Arsenic	<0.01	0	141.	96.0	<0.01
Barium	<0.5			119.7	<0.5
Cadmium	<0.005			109.	<0.005
Chromium	0.012		127.5	110.	<0.01
Lead	0.035			105.4	<0.01
Mercury	<0.0002			85.7	<0.0002
Nickel	0.017			120.	<0.01
Selenium	<0.005	0		88.1	<0.005
Silver	<0.005			103.3	<0.005

TASK 2

Turn Around Time 30 days

Date Analyzed: 8-7-85

Phenol Preservative Batch No. _____

Parameter	Result (mg/l)	Precision (% RSD)	Accuracy (% R)		Method Blank
			Matrix	EPA QC	
Chloride	148.	2.4		100.6	<1
Iron	15.2			104.5	<0.1
Manganese	0.510			103.5	<0.025
Phenols	0.008	0		108.3	<0.01
Sodium	103.			116.	<1.
Sulfate	1000.			117.	<5.

ANALYTICAL REPORT

DLPC Sample A0756 EIS # LP063TASK 3Turn Around Time 30 days

Date Analyzed: 8-20-85

TOC Preservative Batch No. _____

<u>Parameter*</u>	<u>Result</u>	<u>Units</u>	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
				<u>Matrix</u>	<u>EPA QC</u>	
pH	7.5	pH	0			
Sp. Cond.	2610.	umhos	0			
TOC	16.88	mg/l	0.58		99.8	<1
TOH	<0.050	mg/l	32.9			
T Residue	2337.	mg/l	0.42			

* Sp. Cond. = Specific Conductance
 TOC = Total Organic Carbon
 TOH = Total Organic Halogen
 T Residue = Total Residue

TASK 4Turn Around Time 30 days

Date Anayzed: 8-5-85

Cyanide Preservative Batch No. _____

Sulfide Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (ug/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Total Cyanide	6.0			93.8	<5.0
Total Sulfide	1.0				

ANALYTICAL REPORT

DLPC Sample A0756 EIS # LP063TASK 5Turn Around Time 30 days Date Analyzed: 8-19-85
VOC Vial Lot No.

SURROGATE RESPONSES

Surrogate No.	Compound	% Recovery	QC Limits
1	. Trichlorotrifluoroethane		71-128
	. 1,4-Dichlorobutane		69-121
3	. Bromochloromethane	103.3	78-122
	. Toluene, d6	104.8	82-118
	. 1,4-Dichlorobutane	106.5	76-124

SAMPLE RESULTS

Parameter	Result (ug/l)	Precision (% RSD)	Accuracy (%R)		Method Blank ug/l
			Matrix	EPA QC	
Acetone	<10				<10
Acrolein	<10				<10
Acrylonitrile	<10				<10
Benzene	<2				<2
Bromoform	<2				<2
Bromodichloromethane	<2				<2
Bromomethane	<2				<2
Carbon Disulfide	<100				<100
Carbon Tetrachloride	<2				<2
Chlorobenzene	<2				<2
Chlorodibromomethane	<2				<2
Chloroethane	<2				<2
2-Chloroethylvinylether	<2				<2
Chloroform	<2				<2
Chloromethane	<2				<2
Dichlorodifluoromethane	<2				<2
1,1-Dichloroethane	4.8				<2
1,2-Dichloroethane	<2				<2
1,1-Dichloroethene	<2				<2
t-1,2-Dichloroethene	<2				<2
1,2-Dichloropropane	<2				<2
c-1,2-Dichloropropene	<2				<2
t-1,2-Dichloropropene	<2				<2

ANALYTICAL REPORT

DLPC Sample A0756 EIS # LP063

<u>Parameter</u>	<u>Result</u> <u>(ug/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (%R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Ethylbenzene	<2				<2
Fluorotrichloromethane	<2				<2
2-Hexanone	<10				<10
Methylene Chloride	<2				<2
Methyl Ethyl Ketone	<10				<10
Methyl Isobutyl Ketone	<10				<10
Paraldehyde	<10				<10
Styrene	<2				<2
1,1,2,2-Tetrachloroethane	<2				<2
Tetrachloroethylene	<2				<2
Toluene	<2				<2
1,1,1-Trichloroethane	<2				<2
1,1,2-Trichloroethane	<2				<2
Trichloroethylene	<2				<2
Vinyl Acetate	<10				<10
Vinyl Chloride	<2				<2
m-Xylene	<10				<10
o-Xylene	<10				<10
p-Xylene	<10				<10

Oct 28 10 06 AM '85

ANALYTICAL REPORT

DLPC ~~STATE~~ DIVISION OF LAND
POLUTION CONTROL

A0758

EIS # LP064

Date Received: 7-31-85 Received By: JW Date Report Submitted: 10-25-85
BOARD OF HEALTHTASK 1Turn Around Time 30 days

Mercury Preservative Batch No. _____

Other Metal Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (mg/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Arsenic	0.012			96.0	<0.01
Barium	<0.5	0		119.7	<0.5
Cadmium	0.005			109.	<0.005
Chromium	0.027			110.	<0.01
Lead	0.092			105.4	<0.01
Mercury	<0.0002			85.7	<0.0002
Nickel	0.058		113.8	120.	<0.01
Selenium	<0.005			88.1	<0.005
Silver	<0.005			103.3	<0.005

TASK 2Turn Around Time 30 days

Date Analyzed: 8-7-85

Phenol Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (mg/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Chloride	20.			100.6	<1
Iron	45.	1.1		104.5	<0.1
Manganese	1.69	0.2		103.5	<0.025
Phenols	0.011			108.3	<0.005
Sodium	145.	0		116.	<1.
Sulfate	292.			117.	<5.

ANALYTICAL REPORT

DLPC Sample A0758 EIS # LP064TASK 3Turn Around Time 30 days Date Analyzed: 8-20-85
TOC Preservative Batch No. _____

<u>Parameter*</u>	<u>Result</u>	<u>Units</u>	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
				<u>Matrix</u>	<u>EPA QC</u>	
pH	7.2	pH				
Sp. Cond.	1384.	umhos				
TOC	10.96	mg/l	0.96		99.8	<1
TOH	0.062	mg/l				
T Residue	1604.	mg/l				

* Sp. Cond. = Specific Conductance
 TOC = Total Organic Carbon
 TOH = Total Organic Halogen
 T Residue = Total Residue

TASK 4Turn Around Time 30 days Date Analyzed: 8-5-85
Cyanide Preservative Batch No. _____
Sulfide Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (ug/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Total Cyanide	<5.0			93.8	<5.0
Total Sulfide	66.0				

ANALYTICAL REPORT

DLPC Sample A0758 EIS # LP064TASK 5Turn Around Time 30 days Date Analyzed: 8-19-85
VOC Vial Lot No.

SURROGATE RESPONSES

<u>Surrogate No.</u>	<u>Compound</u>	<u>% Recovery</u>	<u>QC Limits</u>
1	. Trichlorotrifluoroethane		71-128
	. 1,4-Dichlorobutane		69-121
3	. Bromochloromethane	85.3	78-122
	. Toluene, d6	84.5	82-118
	. 1,4-Dichlorobutane	90.1	76-124

SAMPLE RESULTS

<u>Parameter</u>	<u>Result</u> <u>(ug/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (%R)</u> <u>Matrix EPA QC</u>	<u>Method</u> <u>Blank ug/l</u>
Acetone	<10			<10
Acrolein	<10			<10
Acrylonitrile	<10			<10
Benzene	<2			<2
Bromoform	<2			<2
Bromodichloromethane	<2			<2
Bromomethane	<2			<2
Carbon Disulfide	<100			<100
Carbon Tetrachloride	<2			<2
Chlorobenzene	<2			<2
Chlorodibromomethane	<2			<2
Chloroethane	<2			<2
2-Chloroethylvinylether	<2			<2
Chloroform	<2			<2
Chloromethane	<2			<2
Dichlorodifluoromethane	<2			<2
1,1-Dichloroethane	4.5			<2
1,2-Dichloroethane	<2			<2
1,1-Dichloroethene	<2			<2
t-1,2-Dichloroethene	<2			<2
1,2-Dichloropropane	<2			<2
c-1,2-Dichloropropene	<2			<2
t-1,2-Dichloropropene	<2			<2

ANALYTICAL REPORT

DLPC Sample A0758 EIS # LP064

<u>Parameter</u>	<u>Result</u> <u>(ug/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (%R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA OC</u>	
Ethylbenzene	<2				<2
Fluorotrichloromethane	<2				<2
2-Hexanone	<10				<10
Methylene Chloride	<2				<2
Methyl Ethyl Ketone	<10				<10
Methyl Isobutyl Ketone	<10				<10
Paraldehyde	<10				<10
Styrene	<2				<2
1,1,2,2-Tetrachloroethane	<2				<2
Tetrachloroethylene	<2				<2
Toluene	<2				<2
1,1,1-Trichloroethane	<2				<2
1,1,2-Trichloroethane	<2				<2
Trichloroethylene	<2				<2
Vinyl Acetate	<10				<10
Vinyl Chloride	<2				<2
m-Xylene	<10				<10
o-Xylene	<10				<10
p-Xylene	<10				<10

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ANALYTICAL REPORT

DLPC Sample
DIVISION OF LAND
RECREATION CONTROL
STATE
BOARD OF HEALTH

A0759

EIS # LP065

Date Received: 7-31-85 Received By: JW Date Report Submitted: 10-25-85

TASK 1Turn Around Time 30 days

Mercury Preservative Batch No. _____

Other Metal Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (mg/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Arsenic	<0.01			96.0	<0.01
Barium	<0.5		108.1	119.7	<0.5
Cadmium	<0.005	0	141.	109.	<0.005
Chromium	0.014	0		110.	<0.01
Lead	0.016	0		105.4	<0.01
Mercury	<0.0002			85.7	<0.0002
Nickel	<0.01	0		120.	<0.01
Selenium	<0.005			88.1	<0.005
Silver	<0.005	0	91.2	103.3	<0.005

TASK 2Turn Around Time 30 days

Date Analyzed: 8-7-85

Phenol Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (mg/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Chloride	540.			100.6	<1
Iron	1.6			104.5	<0.1
Manganese	0.310			103.5	<0.025
Phenols	0.014			108.3	<0.005
Sodium	273.			116.	<1.
Sulfate	326.			117.	<5.

ANALYTICAL REPORT

DLPC Sample A0759 EIS # LP065TASK 3Turn Around Time 30 days Date Analyzed: 8-20-85
TOC Preservative Batch No. _____

<u>Parameter*</u>	<u>Result</u>	<u>Units</u>	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
				<u>Matrix</u>	<u>EPA QC</u>	
pH	7.8	pH				
Sp. Cond.	2790.	umhos				
TOC	8.979	mg/l	4.7		99.8	<1
TOH	0.077	mg/l				
T Residue	1834.	mg/l				

* Sp. Cond. = Specific Conductance
 TOC = Total Organic Carbon
 TOH = Total Organic Halogen
 T Residue = Total Residue

TASK 4Turn Around Time 30 days Date Analyzed: 8-5-85
Cyanide Preservative Batch No. _____
Sulfide Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (ug/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Total Cyanide	<5.0			93.8	<5.0
Total Sulfide	38.0				

ANALYTICAL REPORT

DLPC Sample A0759 EIS # LP065TASK 5Turn Around Time 30 days Date Analyzed: 8-19-85
VOC Vial Lot No.

SURROGATE RESPONSES

<u>Surrogate No.</u>	<u>Compound</u>	<u>% Recovery</u>	<u>QC Limits</u>
1	. Trichlorotrifluoroethane		71-128
	. 1,4-Dichlorobutane		69-121
3	. Bromochloromethane	108.5	78-122
	. Toluene, d6	100.8	82-118
	. 1,4-Dichlorobutane	106.4	76-124

SAMPLE RESULTS

<u>Parameter</u>	<u>Result</u> (ug/l)	<u>Precision</u> (% RSD)	<u>Accuracy (%R)</u>			<u>Method</u>
			<u>Matrix</u>	<u>EPA</u>	<u>QC</u>	<u>Blank ug/l</u>
Acetone	<10					<10
Acrolein	<10					<10
Acrylonitrile	<10					<10
Benzene	<2					<2
Bromoform	<2					<2
Bromodichloromethane	<2					<2
Bromomethane	<2					<2
Carbon Disulfide	<100					<100
Carbon Tetrachloride	<2					<2
Chlorobenzene	<2					<2
Chlorodibromomethane	<2					<2
Chloroethane	<2					<2
2-Chloroethylvinylether	<2					<2
Chloroform	<2					<2
Chloromethane	<2					<2
Dichlorodifluoromethane	<2					<2
1,1-Dichloroethane	<2					<2
1,2-Dichloroethane	<2					<2
1,1-Dichloroethene	<2					<2
t-1,2-Dichloroethene	<2					<2
1,2-Dichloropropane	<2					<2
c-1,2-Dichloropropene	<2					<2
t-1,2-Dichloropropene	<2					<2

ANALYTICAL REPORT

DLPC Sample A0759 EIS # LP065

<u>Parameter</u>	<u>Result</u> <u>(ug/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (%R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Ethylbenzene	<2				<2
Fluorotrichloromethane	<2				<2
2-Hexanone	<10				<10
Methylene Chloride	<2				<2
Methyl Ethyl Ketone	<10				<10
Methyl Isobutyl Ketone	<10				<10
Paraldehyde	<10				<10
Styrene	<2				<2
1,1,2,2-Tetrachloroethane	<2				<2
Tetrachloroethylene	<2				<2
Toluene	<2				<2
1,1,1-Trichloroethane	<2				<2
1,1,2-Trichloroethane	<2				<2
Trichloroethylene	<2				<2
Vinyl Acetate	<10				<10
Vinyl Chloride	<2				<2
m-Xylene	<10				<10
o-Xylene	<10				<10
p-Xylene	<10				<10

OCT 28 10 05 AM '85

ANALYTICAL REPORT

DIVISION OF LAND
DLPC Sample Collection Control
STATE

A0760

EIS # LP066

Date Received: 10-21-85

Received By: JW Date Report Submitted: 10-25-85

TASK 1Turn Around Time 30 days

Mercury Preservative Batch No. _____

Other Metal Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (mg/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Arsenic	<0.01			96.0	<0.01
Barium	<0.5			119.7	<0.5
Cadmium	<0.005			109.	<0.005
Chromium	<0.01			110.	<0.01
Lead	<0.01			105.4	<0.01
Mercury	<0.0002			85.7	<0.0002
Nickel	<0.01			120.	<0.01
Selenium	<0.005			88.1	<0.005
Silver	<0.005			103.3	<0.005

TASK 2Turn Around Time 30 days

Date Analyzed: 8-7-85

Phenol Preservative Batch No. _____

<u>Parameter</u>	<u>Result</u> (mg/l)	<u>Precision</u> (% RSD)	<u>Accuracy (% R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Chloride	<1.			100.6	<1
Iron	0.12			104.5	<0.1
Manganese	<0.025			103.5	<0.025
Phenols	<0.005			108.3	<0.005
Sodium	<1.			116.	<1.
Sulfate	<5.			117.	<5.

ANALYTICAL REPORT

DLPC Sample A0760 EIS # LP066TASK 3Turn Around Time 30 daysDate Analyzed: 8-26-85TOC Preservative Batch No.

<u>Parameter*</u>	<u>Result</u>	<u>Units</u>	<u>Precision (% RSD)</u>	<u>Accuracy (% R)</u>		<u>Method Blank</u>
				<u>Matrix</u>	<u>EPA QC</u>	
pH	5.8	pH				
Sp. Cond.	1.535	umhos				
TOC	0.109	mg/l	18.1		97.8	<1
TOH**	<0.050	mg/l				
T Residue	<1.	mg/l				

* Sp. Cond. = Specific Conductance
 TOC = Total Organic Carbon
 TOH = Total Organic Halogen
 T Residue = Total Residue

** This sample yielded 2.45 ug Chloride for 80 mg Carbon + Nitrate Wash

TASK 4Turn Around Time 30 daysDate Analyzed: 8-5-85Cyanide Preservative Batch No. Sulfide Preservative Batch No.

<u>Parameter</u>	<u>Result (ug/l)</u>	<u>Precision (% RSD)</u>	<u>Accuracy (% R)</u>		<u>Method Blank</u>
			<u>Matrix</u>	<u>EPA QC</u>	
Total Cyanide	<5.0	0		93.8	<5.0
Total Sulfide	<4.0				

ANALYTICAL REPORT

DLPC Sample A0760 EIS # LP066TASK 5Turn Around Time 30 days Date Analyzed: 8-19-85
VOC Vial Lot No.

SURROGATE RESPONSES

Surrogate No.	Compound	% Recovery	QC Limits
1	. Trichlorotrifluoroethane		71-128
	. 1,4-Dichlorobutane		69-121
3	. Bromochloromethane	101.7	78-122
	. Toluene, d6	104.3	82-118
	. 1,4-Dichlorobutane	104.0	76-124

SAMPLE RESULTS

Parameter	Result (ug/l)	Precision (% RSD)	Accuracy (%R)		Method Blank ug/l
			Matrix	EPA QC	
Acetone	<10				<10
Acrolein	<10				<10
Acrylonitrile	<10				<10
Benzene	<2				<2
Bromoform	<2				<2
Bromodichloromethane	<2				<2
Bromomethane	<2				<2
Carbon Disulfide	<100				<100
Carbon Tetrachloride	<2				<2
Chlorobenzene	<2				<2
Chlorodibromomethane	<2				<2
Chloroethane	<2				<2
2-Chloroethylvinylether	<2				<2
Chloroform	<2				<2
Chloromethane	<2				<2
Dichlorodifluoromethane	<2				<2
1,1-Dichloroethane	<2				<2
1,2-Dichloroethane	<2				<2
1,1-Dichloroethene	<2				<2
t-1,2-Dichloroethene	<2				<2
1,2-Dichloropropane	<2				<2
c-1,2-Dichloropropene	<2				<2
t-1,2-Dichloropropene	<2				<2

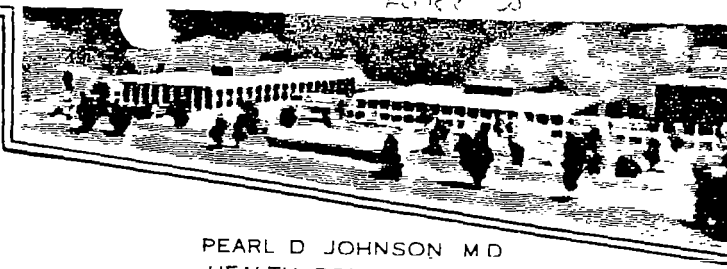
ANALYTICAL REPORT

DLPC Sample A0760 EIS # LP066

<u>Parameter</u>	<u>Result</u> <u>(ug/l)</u>	<u>Precision</u> <u>(% RSD)</u>	<u>Accuracy (%R)</u>		<u>Method</u> <u>Blank</u>
			<u>Matrix</u>	<u>EPA OC</u>	
Ethylbenzene	<2				<2
Fluorotrichloromethane	<2				<2
2-Hexanone	<10				<10
Methylene Chloride	<2				<2
Methyl Ethyl Ketone	<10				<10
Methyl Isobutyl Ketone	<10				<10
Paraldehyde	<10				<10
Styrene	<2				<2
1,1,2,2-Tetrachloroethane	<2				<2
Tetrachloroethylene	<2				<2
Toluene	<2				<2
1,1,1-Trichloroethane	<2				<2
1,1,2-Trichloroethane	<2				<2
Trichloroethylene	<2				<2
Vinyl Acetate	<10				<10
Vinyl Chloride	<2				<2
m-Xylene	<10				<10
o-Xylene	<10				<10
p-Xylene	<10				<10

LAKE COUNTY HEALTH DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT INDIANA 46307
PHONE 738-2020 OR 663-0760



PEARL D JOHNSON M.D.
HEALTH COMMISSIONER

November 21, 1986

Mr. Larry Hagen
Gary Development Company
Box 6056
Gary, Indiana 46406

Dear Mr. Hagen,

This is a letter report of the analysis performed on four samples of well water, which were delivered to this laboratory on November 6, 1986.

<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.2	15.0	356	570.0	91.9	1352
South	7.2	77.6	360	1388.4	96.6	2628
East	7.6	51.7	978	574.6	114.0	2190
West	7.7	104.0	50	223.4	2.1	700

Note: Units of concentration for Chloride, COD, Hardness, Iron and Dissolved Solids are parts-per-million (ppm).

If you have any questions, please contact me at this office.

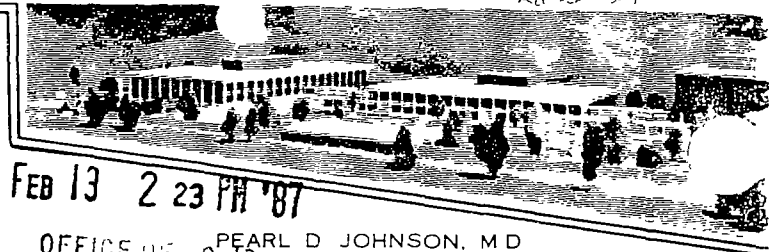
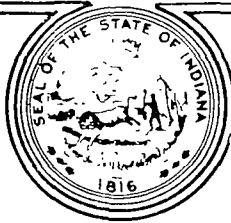
Sincerely,

Cheryl Pauer
Cheryl Pauer
Chemist

sent to EPA KK

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE 738-2020 OR 663-0760



FEB 13 2 23 PM '87

OFFICE OF PUBLIC HEALTH AND HAZARDOUS WASTE MGMT
PEARL D. JOHNSON, M.D.
HEALTH COMMISSIONER
DEM February 6, 1987

Mr. Larry Hagen
Gary Development Company
Box 6056
Gary, Indiana 46406

Dear Mr. Hagen,

This is a letter report of the analysis performed on three samples of well water, which were delivered to this laboratory on January 30, 1987.

<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
South	7.2	93.6	1134.1	977.2	157.0	2026
East	7.7	81.8	3594.5	315.4	134.0	1812
West	7.6	159.1	229.2	354.6	10.8	1022

Note: Units of concentration for Chloride, COD, Hardness, Iron and Dissolved Solids are parts-per-millions (ppm).

If you have any questions, please contact me at this office.

Sincerely,

Cheryl Pauer

Cheryl Pauer
Chemist

WELL #4 THE NORTH WELL, WAS
LOST IN THE SNOW, COULD NOT FIND
AT TIME OF SAMPLING.

L. Hagen

... 128 P.M.

Lake County Health Department Laboratory
2293 N. Main Street
Crown Point, Indiana 46307
Phone: 738-2020 X318

DEC 15 2 22 PM '88

OFFICE OF SOLID
AND HAZARDOUS
WASTE MGMT
DEM

Date: December 5 1988

To:

GARY Development

Box 6056

GARY, IN. 46406

Attention: MR. LARRY HABEN

Re:

RESULTS ON WELL WATER

Tabulated below are laboratory findings on well water samples collected on:

Date	Sample	pH	Chloride (ppm)	COD (ppm)	Calcium Hardness (ppm)	Total Iron (ppm)	Total Dissolved Solids (ppm)
<u>11/30/88</u>	<u>N</u>	<u>7.0</u>	<u>3.0</u>	<u>120.3</u>	<u>712</u>	<u>7.5</u>	<u>1880</u>
	<u>S</u>	<u>7.4</u>	<u>5.0</u>	<u>185.0</u>	<u>1400</u>	<u>4.25</u>	<u>1800</u>
	<u>E</u>	<u>7.6</u>	<u>2.0</u>	<u>47.3</u>	<u>1056</u>	<u>3.25</u>	<u>2150</u>
	<u>W</u>	<u>7.8</u>	<u>5.5</u>	<u>72.0</u>	<u>568</u>	<u>0.35</u>	<u>690</u>

Thank you,

Michael Krzyz

Chemist

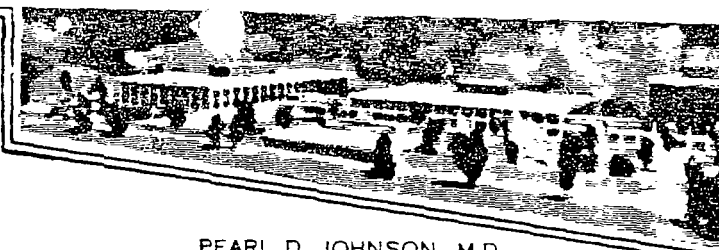
HERE ARE THE TEST RESULTS
FOR OUR 4 WELLS, THE FIRST SET
OF SAMPLES AT END OF OCT, WERE
LOST OR MISPLACED AT LAB.
RESAMPLED IN NOV.

L. Haben

COPY SENT TO EPA

LAKE COUNTY HEALTH DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE 738-2020 OR 663-0760



PEARL D. JOHNSON, M.D.
HEALTH COMMISSIONER

August 23, 1985

Gary Development Company
Box 6056
Gary, Indiana 46406

IND 077005-916

AUG 24 10 13 AM '85
DIVISION OF LAND
POLLUTION CONTROL
STATE
BOARD OF HEALTH

Attn: Mr. Larry Hagen:

Given below are test data obtained from four samples of Well
Water which you delivered to this laboratory on July 30, 1985.

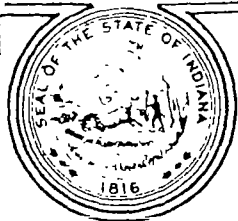
<u>Sample</u>	<u>pH</u>	<u>Chloride</u>	<u>COD</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.5	22.4	375	298	0.15	600
South	7.5	127.3	60	693	0.17	1200
East	7.5	54.8	900	1098	0.17	1900
West	8.0	616.0	17	242	0.49	1500

Sincerely,

Cheryl A. Pauer

LAKE COUNTY HEALTH DEPARTMENT

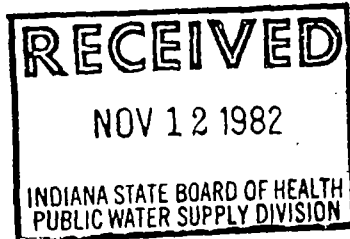
LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT INDIANA 46307
PHONE 738-2020 OR 663-0760



PETER STECY MD
HEALTH COMMISSIONER

November 3, 1982

2Cld
I-F



Gary Development Co. Inc.
Box 6056
Gary, Ind. 46406
Attention: Mr. Larry Hagen

Test data tabulated below were obtained for 4 Well samples from Sanitary land fill 45 - 2 that your personel delivered to our laboratory on November 1, 1982.

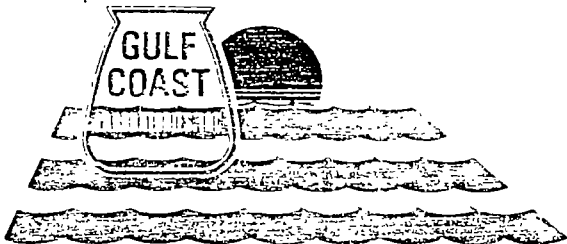
Samples	pH	Chloride	Chem Oxygen Demand	Total Hard	Total Iron	Total Dis Sol
North	7.2	500	60	240	.8	675
South	7.55	250	100	400	1.1	1125
West	8.1	350	550	80	.85	1175
Bldg.	8.5	100	60	40	.3	700

Nov 15 1 25 PM '82
STATE OF INDIANA
DEPT. OF HEALTH

Sincerely,
Andrew F. Livovich
Andrew F. Livovich
C. Chemist

AFL/lr

WATER SAMPLES FROM WELLS OCT. 29. 82



GULF COAST LABORATORIES, INC.

2417 Bond St., Park Forest South, Illinois 60466

Phones (312) 534-5200 (219) 885-7077 (815) 727-7773

ANALYTICAL REPORT

I-F

TO: Gary Development
P. O. 6056
Gary, Indiana 46406

DATE: February 24, 1983

RE: Monitoring Well Analysis
Sample Date: 2/08/83
West Well
GCL# 35971

ATTN: Mr. Larry Hagen

PARAMETERS

RESULTS

Chloride

325 mg/l

COD

40 mg/l

Hardness

320 mg/l

Total Iron

0.3 mg/l

pH

6.8

Total Dissolved Solids

1,070 mg/l

Approved: _____

Analyst _____ Date _____



GULF COAST LABORATORIES, INC

2417 Bond St., Park Forest South, Illinois 60466

Phones (312) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

I-F

TO: Gary Development
P. O. 6056
Gary, Indiana 46406.

ATTN: Mr. Larry Hagen

DATE: February 24, 1983

RE: Monitoring Well Analysis
Sample Date: 2/08/83
South Well
GCL# 35970

PARAMETERS

RESULTS

Chloride

245 mg/l

COD

630 mg/l

Hardness

1,060 mg/l

Total Iron

0.3 mg/l

pH

7.2

Total Dissolved Solids

1,870 mg/l

Approved: _____

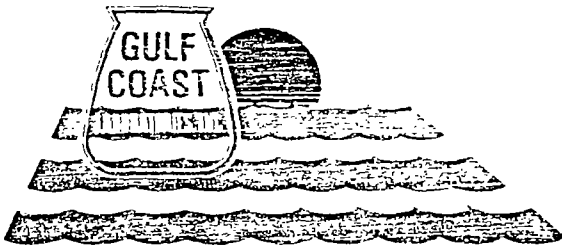
Donald J. Apple

Analyst _____

Date _____

2/24/83

Jan. 83 Water Sampled



GULF COAST LABORATORIES, INC.

2417 Bond St., Park Forest South, Illinois 60466

Phones (312) 534-5200 (219) 685-7077 (815) 1

ANALYTICAL REPORT

20d

I-F

TO: Gary Development
P. O. 6056
Gary, Indiana 46406

ATTN: Mr. Larry Hagen

DATE: February 24, 1983

RE: Monitoring Well Analysis
Sample Date: 2/08/83
North Well
GCL# 35969

PARAMETERS

RESULTS

Chloride	83 mg/l
COD	45 mg/l
Hardness	290 mg/l
Total Iron	1.1 mg/l
pH	7.2
Total Dissolved Solids	1,115 mg/l

MAR 7 2 35 PM '83
DIV OF LAND POLLUTION CONTROL
STATE BOARD OF HEALTH

Approved:

Donald Lippe

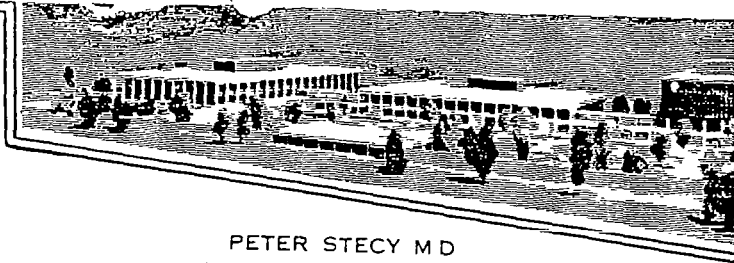
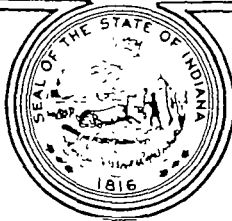
Analyst

Date

2/24/83

LAKE COUNTY HEALTH DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE 738-2020 OR 663-0760



PETER STECY MD
HEALTH COMMISSIONER

May 11, 1983

2C1d

MAX 16 3 42 PM '83
DIV OF LABOR & INDUSTRY CONTROL
STATE BOARD OF HEALTH

I-7

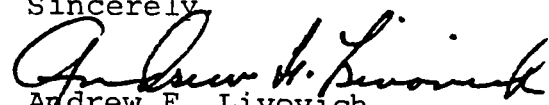
Gary Development Co. Inc.
Box 6056
Gary, Ind. 46406
Attention: Mr. Larry Hagen

Given below are data obtained for three samples of Water from Sanitary landfill 45-2 that you delivered to our laboratory on May 10, 1983.

<u>Samples</u>	<u>pH</u>	<u>Chloride</u>	<u>Chem. Oxygen Demand</u>	<u>Hardness</u>	<u>Iron</u>	<u>Total Dissolved Solids</u>
North	7.6	200	76	260	.77	900
South	7.5	205	200	900	.80	1450
West	7.7	325	40	200	.48	1050

Kindly send a check of \$117.00 to the Lake County Health Dept. to cover cost of tests.

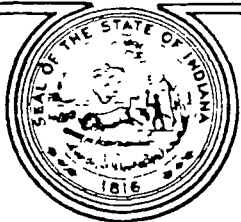
Sincerely,


Andrew F. Livovich
C. Chemist

Copy:
E. Hoshaw

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE 738-2020 OR 663-0760



PETER STECY M.D.
HEALTH COMMISSIONER

September 1, 1983

201d
SEP 9 4 06 PM '83
I-F
DIV OF LAND & POLLUTION CONTROL
STATE BOARD OF HEALTH

Gary Development Co.
Box 6056
Gary, Indiana 46406

Attention: Mr. Larry Hagen:

Given below are data obtained for three Well samples from Sanitary Landfill 45-2 that you delivered to our Laboratory on August 30, 1983.

<u>Samples</u>	<u>pH</u>	<u>Chloride</u>	<u>Chem. Oxygen Demand</u>	<u>Calcium Hardness</u>	<u>Total Iron</u>	<u>Total Dissolved Solids</u>
North	7.55	150	40	120	1.2	950
South	7.30	135	120	116	1.35	1100
West	7.25	250	130	80	0.1	1000

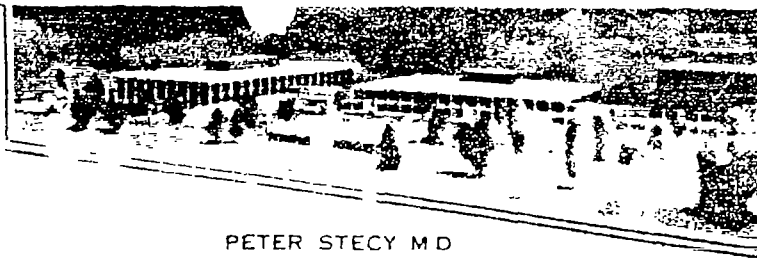
Kindly send check of \$117.00 to the Lake County Health Dept. to cover costs of Tests.

Sincerely,

Andrew F. Livovich
Andrew F. Livovich
C. Chemist

Copy:
Esther, Hoshaw

LAKE COUNTY HEALTH
DEPARTMENT



CROWN (INT) INDIANA 463.7
PHONE 738-2020 OR 663-0760

PETER STECY MD
HEALTH COMMISSIONER

November 14, 1983

2cd

NOV 21 8 44 AM '83
DIV OF ENVIRONMENTAL CONTROL
STATE DEPT OF HEALTH
I-F

Gary Development Co.
Box 6056
Gary, Ind. 46406
Attention: Larry Hagen:

Given below are data obtained for three Well Samples from Sanitary Landfill 45-2 that you delivered to our laboratory on November 10, 1983.

Parts Per Million

Well	pH	Chloride	Chem Oxygen Demand	Calcium Hardness	Total Iron	Total Dissolved Solids
North	7.4	140	80	330	2	800
South	7.7	180	200	135	2 ³ / ₄	1200
West	7.1	295	50	165	0.4	1150

Kindly send check of \$117.00 to the Lake County Health Dept. to cover costs of tests.

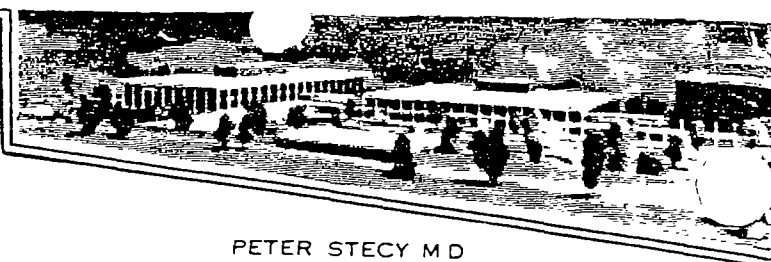
Sincerely,

Andrew F. Livovich
Andrew F. Livovich
C. Chemist

AFL/lr

LAKE COUNTY HEALTH
DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT INDIANA 46307
PHONE 738-2020 OR 663-0760



PETER STECY M D
HEALTH COMMISSIONER
February 17, 1984

Gary Development Co.
Box 6056
Gary, Ind. 46406

Attention: Mr. Larry Hagen

Given below are test data obtained from three Well Samples that you delivered to our laboratory on February 15, 1984:

Parts Per Million

Well	pH	Chloride	Chem Oxygen Demand	Calcium Hardness	Total Iron	Total Dissolved Solids
North	7.5	75	400	410	1.45	750
South	7.1	420	500	1400	1.55	350
West	7.5	250	50	150	0.4	720

Kindly send check of \$117.00 to the Lake County Health Dept, to cover costs of tests.

Sincerely,

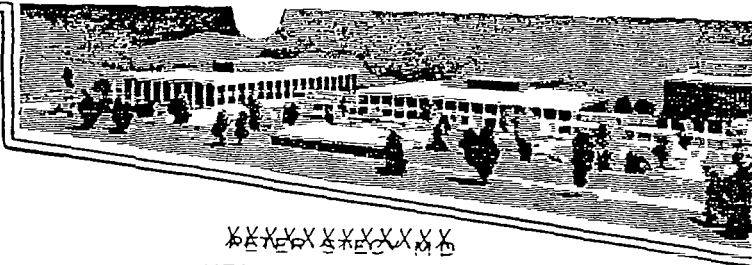
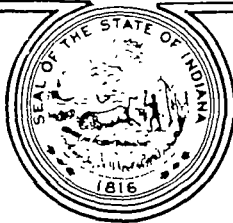
Andrew F. Livovich
Andrew F. Livovich
C. Chemist

AFL/lr

Copy:
Esther Hoshaw

LAKE COUNTY HEALTH DEPARTMENT

LAKE COUNTY GOVERNMENT CENTER
2293 NORTH MAIN STREET
CROWN POINT, INDIANA 46307
PHONE 738-2020 OR 663-0760



XXXXXXXXXXXX
HEALTH COMMISSIONER

PEARL JOHNSON M.D.

GARY DEVELOPMENT CO.
BOX 6056
GARY, INDIANA 46406

Attn: Mr. Larry Hagen

May 3, 1984

Dear Mr. Hagen,

Test data tabulated below were obtained from three (3) well samples that you delivered to our laboratory on April 27, 1984.

PARTS PER MILLION

WELL	pH	CHLORIDE	CHEMICAL OXYGEN DEMAND	CALCIUM HARDNESS	TOTAL IRON	TOTAL DISSOLVED SOLIDS
NORTH	7.2	75	250	200	2.6	950
SOUTH	7.0	650	240	650	3.0	2650
WEST	7.4	525	50	120	0.45	1500

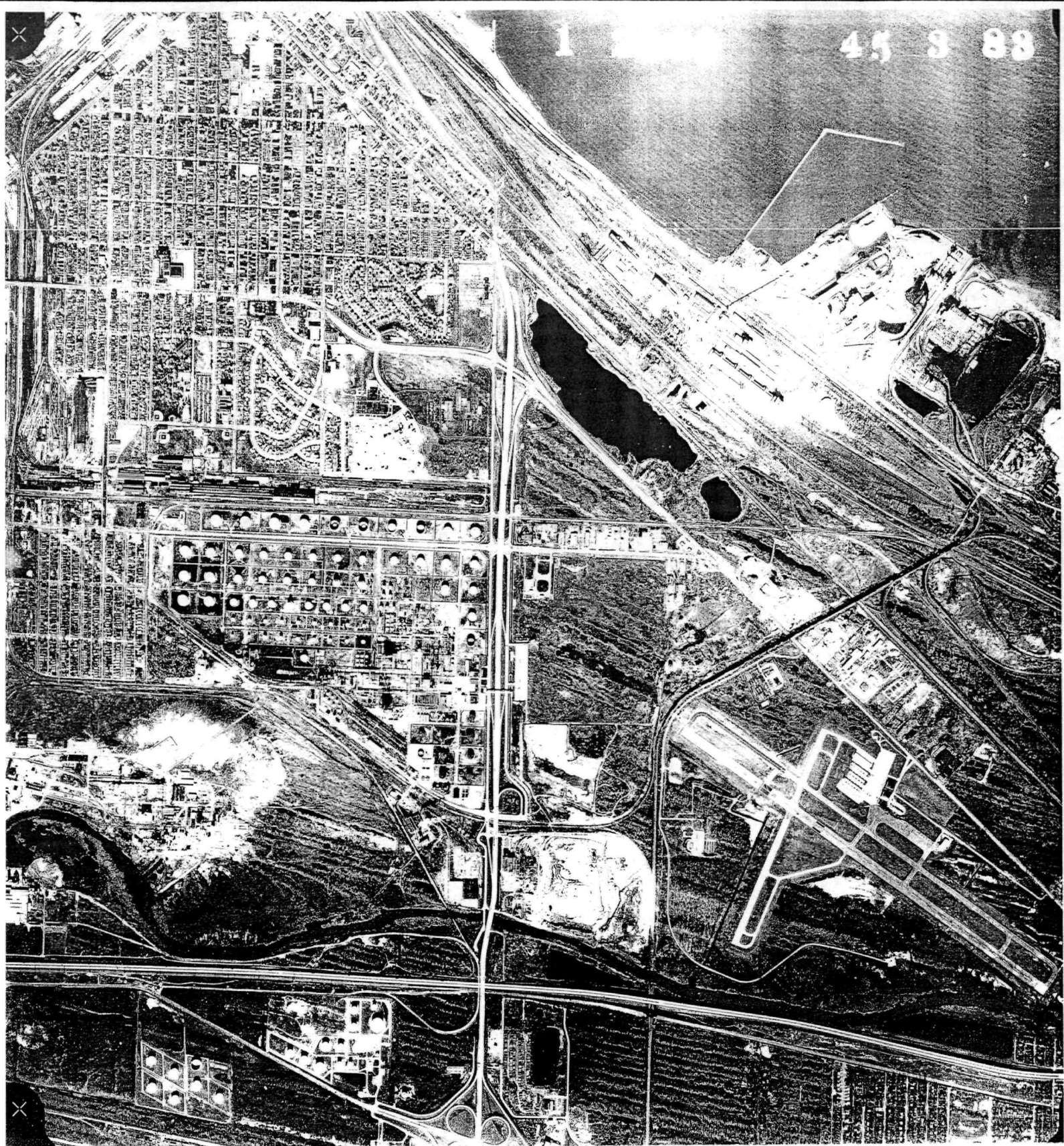
Enclosed is a Statement of Fees covering costs of Tests Performed. Please note the increase in fees based on new fee schedule of the Lake County Health Department.

Sincerely,

Andrew Livovich
Andrew Livovich
Chief Chemist -

2Cld
I-F

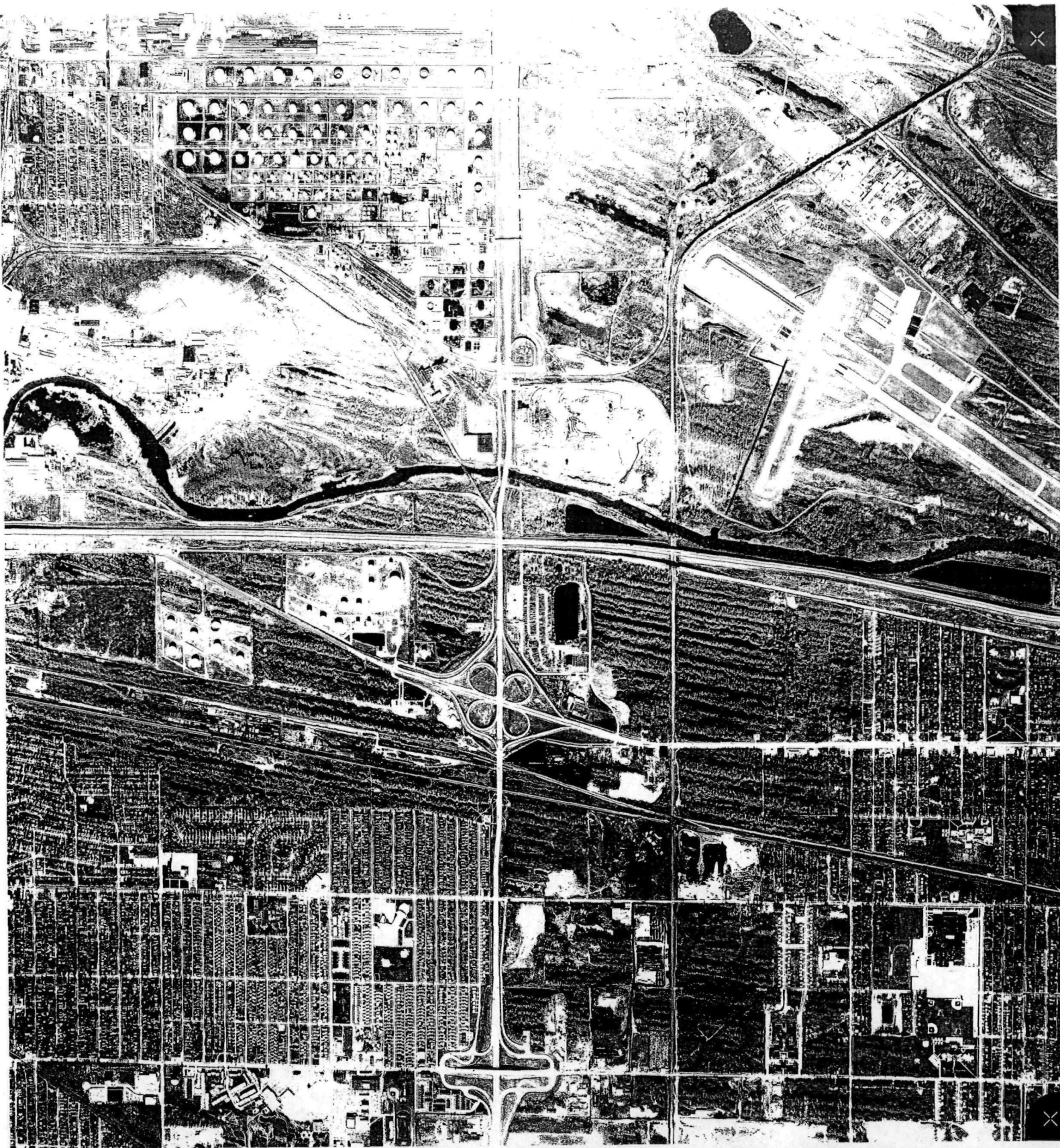
RECEIVED
MAY 11 1984
HEALTH DEPARTMENT



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

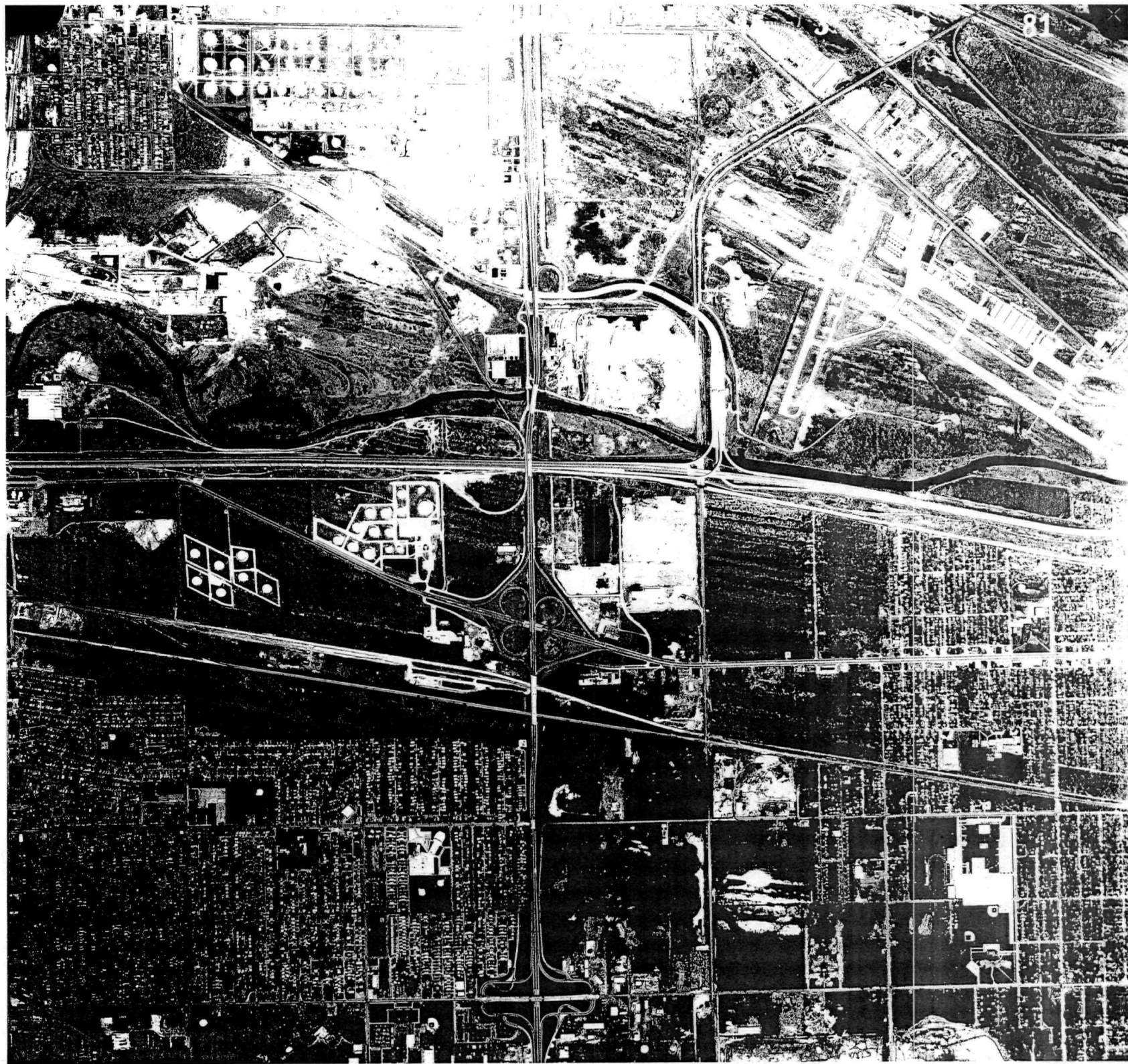
N
↑
11-12-5-83

AN 11-14-75 #82



↑N
5-11-89

#81





REGISTRATION FOR USE OF RECORDS IN THE INDIANA STATE ARCHIVES

State Form 48404 (R2 / 2-06)

The Indiana State Archives serves to ensure the preservation of important official and historical public records, and to make them available to patrons. Patrons are expected to read and observe the following guidelines for the reading room of the Indiana State Archives. These guidelines are based on Indiana law found in IC 5-15-5.1 and have been adopted in accordance with policy 05-02 of the Oversight Committee on Public Records. If you have any questions, a staff member can explain or demonstrate the guidelines for you.

GUIDELINES FOR THE USE OF RECORDS

1. All patrons must read, sign and date the registration form prior to use of all records or reference sources. The signed registration form shall constitute an acknowledgment that the patron will abide by the guidelines and procedures outlined on the registration form.
2. Food and drink are not allowed in the reading room.
3. Coats must be hung in the designated area. All carrying bags or briefcases must be lockered. Only note pads and laptop computers will be permitted to rest on table tops. The State Archives reserves the right to inspect personal belongings at any time.
4. Pencils must be used in taking notes. Pens and magic markers are not permitted to be used in conjunction with Archives' records. Pencils can be provided to patrons.
5. No documents may be taken out of the reading room.
6. When examining materials, patrons must keep documents in the original order found in the box or folder.
7. Lay documents, including photographs, flat on table during use. Do not hold up, put in lap, or otherwise hold during use. Do not lean on records, or put notebook on documents.
8. Microfilm or other reproductions of documents will be used when available.
9. Cotton protective gloves will be used for handling all photographs / negatives, and certain documents at the archivist's discretion. Gloves are available at the reference desk.
10. Citations to records in the Indiana State Archives in both published and non-published works and exhibitions will read, "Indiana State Archives, Commission on Public Records."
11. Requests for records will be handled one at a time and in the order they were received.
12. Records will be retrieved from remote stacks locations until one half hour before closing time. Patrons will be requested to stop and return Archives materials ten minutes before closing time.
13. Reproductions are provided to patrons at a cost and according to established procedures. The Indiana State Archives will weigh the need for preservation from deterioration or mutilation of original records when receiving a request to inspect or copy records. No personal scanning or camera equipment is permitted to be used to record documents at the State Archives. (IC 5-15-5.1-7)
14. The Indiana State Archives takes no responsibility for the patron's misuse of copyright.

I agree to abide by the guidelines listed above while using records in the Indiana State Archives.

(Please fill out the form below legibly and completely).

Signature of patron <i>Mark Jaworski</i>	Date (month, day, year) <i>2/9/10</i>	
Name of patron (printed) <i>MARK JAWORSKI</i>		
Agency / Institution <i>Indiana Department of Environmental Management</i>		
Address (number and street) <i>100 N. Senate</i>		
City <i>Indianapolis</i>	State <i>IN</i>	ZIP code

DISTRIBUTION: White - Indiana State Archives; Canary - Patron



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

LP-9J

May 8, 2009

RECEIVED

MAY 13 2009

DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
OFFICE OF LAND QUALITY

Mr. Mike Sickels
Indiana Department of Environmental Management
Office of Land Quality/Remediation Services Branch
100 North Senate Avenue
Room IGCN 1154
Indianapolis, IN 46204

Dear Mr. Sickels:

Re: Gary Development – IND 077 005 916

In response to your recent request for Compliance Monitoring and Enforcement records relating to Gary Development, records from the Land and Chemicals Division (LCD) have been reviewed, duplicated and are enclosed (see enclosed list).

I would like to bring to your attention two folders that contain records usually considered “enforcement confidential.” Leverett Nelson, Associate Regional Counsel, reviewed the folders on May 1, 2009, and determined that due to our partnership with IDEM, we would not withhold attorney notes that would usually be withheld from members of the general public. We ask that you guard against duplication, further release and distribution of the records found in the **C.3 Enforcement Confidential** folders.

The entire file is being provided free of charge, as I am not aware of your request being assigned as an official Freedom of Information Act request.

If you have any questions, please call me at 312-886-4188.

Sincerely,

A handwritten signature in black ink, appearing to read "Terri Rancher".

Terri J. Rancher
Environmental Protection Specialist

Gary Development
IND 097 005 916

A.2 Part A/Interim Status – records dated from 11/14/80 – 1/15/97

A 3.1 – A.3 4 Correspondence/Samplings (1983 -) – records dated 9/1/83 – 1/8/97

B.1.1 – B.1.8 Correspondence Variance/State (1982 -) - records dated 11/14/80 – 11/9/89

C 1 Compliance Inspection Report – records dated 8/19/87 – 2/1/95

C.2 Hazardous Waste Manifest (1980-1987) – records dated 12/5/80 – 11/18/87

C.2 Hazardous Waste Tracking Forms ('80 – '83) – records dated 12/3/81 – 12/31/82

C.2 Compliance Enforcement (1980 -) records dated 5/28/82 – 9/2/97

C.3 Enforcement Confidential (1979 – 1996) records dated 3/22/76 – 10/16/96

C.3 Enforcement Confidential – records dated 1/9/97 – 11/9/98

D.1.4 Preliminary Assessment Visual Site Inspection – records dated 6/17/85 – 9/25/87

F.1 Imagery and Special Studies – records dated 9/26/96 – 1/22/97

Suspense (records yet to be classified and filed) records dated 4.8.96 – 3/23/00

→ Not to be used as primary references or duplicated in any manner.

MES,
5/13/09

~~referred~~